NEAR EAST UNIVERSITY

INSTITUTE OF GRADUATE STUDIES

DEPARTMENT OF BANKING AND FINANCE

INVESTIGATING THE ROLE OF FOREIGN DIRECT INVESTMENT ON SUSTAINABLE DEVELOPMENT IN NIGERIA (1990-2020)

MSc. THESIS

ABRAHAM WALLACE KARSUAH

Nicosia

JANUARY, 2023

NEAR EAST UNIVERSITY

INSTITUTE OF GRADUATE STUDIES

DEPARTMENT OF BANKING AND FINANCE

INVESTIGATING THE ROLE OF FOREIGN DIRECT INVESTMENT ON SUSTAINABLE DEVELOPMENT IN NIGERIA (1990-2020)

MSc. THESIS

ABRAHAM WALLACE KARSUAH

Supervisor

Assoc. Prof. Dr. Turgut TURSOY

Chairman, Banking and Finance Department

Nicosia

JANUARY, 2023

Approval

After careful scrutiny of the thesis titled: **"INVESTIGATING THE ROLE OF FOREIGN DIRECT INVESTMENT ON SUSTAINABLE DEVELOPMENT IN NIGERIA, (1990-2020)** submitted by **ABRAHAM WALLACE KARSUAH**. It has met the unanimous consensus and in our combined opinion, it is fully adequate, in scope and in quality, as a thesis for the degree of Master Educational Sciences, and hereby recommended for approval and acceptance.

Examining Committee:	Name-Surname:	Signature:
Head of the committee:	Assoc. Prof. Dr. Turgut Tursoy	
Committee Member:	Assist. Prof. Dr. Mehdi Seraj	
Committee Member:	Assist Prof. Ala Fathi Assi	
Supervisor	Assoc. Prof. Dr. Turgut Tursoy	
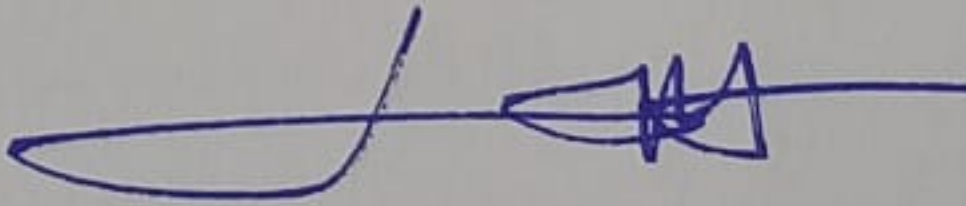
Approved by the Head of the Department

13 / 01 /20 23

Assoc. Prof. Dr. Turgut Tursoy

Head of the Department

Approved by the Institute of Graduate studies

/ /20

Prof. Dr. Kemal Husnu Can Baser

Head of the Institute
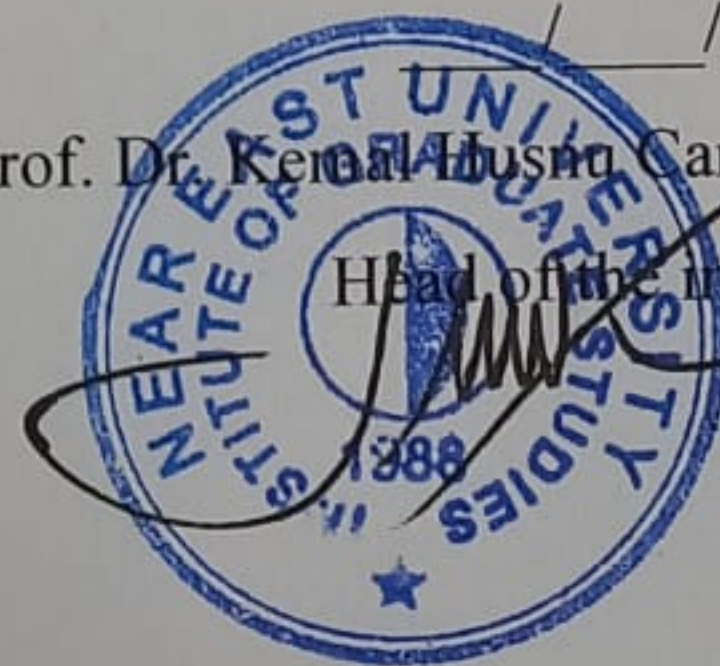
Declaration

I hereby declare that all information which is being presented in this thesis entitled "Topic: Investigating the Role OF Foreign Direct Investment on Sustainable Development in Nigeria: Case Study Nigeria (1990-2020)" was collected, analyzed, tailored in accordance with all academic rules and ethical guidelines the Institute of Graduate School, Near East University. I also declare that all additional materials used in the preparation of this thesis are fully cited, acknowledge and reference to the best of my ability.

Abraham Wallace Karsuah

…../…../…..

Acknowledgment

First & foremost, I would like to express my sincere gratitude to the Almighty God for his countless blessing upon my life. I would also like to extend my appreciation to my dynamic supervisor, Assoc. Prof. Dr. Turgut Tursoy who is also the head of the department of Banking & Finance - faculty of economics & administrative sciences - Near East University. His supervisory role had a significant impact on the preparation of this paper; he checked on non-compliant applications and turned them into masterpieces, and this paper would not have been completed without his ingenuity and guidance through the processes. Thank you, Assoc. Prof. Dr. Turgut Tursoy, for your prompt responses to many enquiries that were made by me during this academic sojourn. Your words of encouragement have taken deep root inside my heart. Your guidance and open kindness have taught me a lot. I am grateful for this opportunity and will utilize the knowledge, gained in research writing.

However, I wish to express my heartfelt gratitude to my supporting arm, the Executive Director and Chief Executive Officer (CEO), Prof. Wilson K. Tarpeh, the Deputy Executive Director, Hon. Randell M. Dobayou, and the entire management team of the Environmental Protection Agency of Liberia, whose helping hands have made life easy for me since I embarked on this pursuit of a master's degree. Their responsiveness to my requests each time has made life easy for me on this journey.

I am eternally grateful to my caring parents, Mr. A. Wallace Karsuah and Mrs. Helean T. Karsuah, who have encouraged and pushed me to achieve my degree. Mr. and Mrs. Karsuah, I am forever grateful for your constant support from my childhood days until now. A special thank you message to my extended family, Hon. C. Mike Doryen, Managing Director, Forestry Development Authority, and Mrs. Fatu S. Doryen, who has never left my side during this scholastic journey.

I owe a sincere appreciation to my special mother, Phil Kotati Karnga, for her unwavering support throughout the years. Thank you very much for your financial and moral assistance.

My esteem thanks and appreciation go to my beloved daughter P. Ellah D. Karsuah, the one who brings me joy and blessings every single day of my life, for her day-in and day-out kind words and for her unflinching emotional and physical support that got this work this far.

Abraham Wallace Karsuah

…../…../…..

Abstract

Investigating The Role of Foreign Direct Investment on Sustainable Development in Nigeria (1990-2020)

ABRAHAM WALLACE KARSUAH

MSc. Department of Banking and Finance

January, 2023 Page,115

This thesis investigates the role of FDI in Nigeria's sustainable development from 1990 to 2020. FDI plays a significant part in supporting sustainable development and prosperity in advanced nations. The exchange and dissemination of technical information is the most crucial factor. This is significant since the economies of these nations are tiny, resulting in low tax collections; as a consequence, foreign direct investments encourage domestic savings and help bridge or satisfy resource deficits. Foreign direct investment is critical for both established and growing economies. To evaluate the cointegration of the variables, the ARDL short and long runs, as well as the ARDL bound testing approach, were used. According to the bound test results, the independent variables and the dependent variable have a long-term statistically important correlation that is statistically important at the 1%, 5%, and 10% levels of significance when using the F statistic (16.49816). As a consequence, we reject the null hypothesis that co-integration exists. Furthermore, FDI & the exchange rate has a negative influence on Nigeria's sustainable development, while net trade has a favorable influence on economic development in the short term but a negative influence in the long run. On the other hand, inflation has helped Nigeria's sustainable development during the time interval of the research. The requirement for local content should be reconsidered by the government. Instead of relying on FDI as the key economic engine, Nigeria's government and citizens should encourage greater domestic investment to speed growth. Nigeria should enact a code of conduct for multinational firms to limit their restrictive business methods, limit their repatriation of profits from Nigeria, and ensure that a significant amount of their revenues is reinvested in the Nigerian economy. Because there's a clear link among FDI and sustainable development in Nigeria, the

government may actually encourage FDI inflows into the country by lowering insecurity, providing social amenities, and adopting other required activities that would result in economic progress in Nigeria.

Keywords: FDI, Economic growth, Inflation, Net trade, Exchange rate, Sustainable development

Özet

Nijerya'da Sürdürülebilir Kalkınmada Doğrudan Yabancı Yatırımın Rolünün İncelenmesi (1990-2020)
ABRAHAM WALLACE KARSUAH
MSc. Bankacılık ve Finans Bölümü
Ocak, 2023 Sayfa,115

Bu tez, 1990'dan 2020'ye kadar Nijerya'nın sürdürülebilir kalkınmasında DYY'nin rolünü araştırıyor. DYY, gelişmiş ülkelerde sürdürülebilir kalkınma ve refahın desteklenmesinde önemli bir rol oynuyor. Teknik bilgilerin değişimi ve yayılması en önemli faktördür. Bu, bu ulusların ekonomilerinin küçük olması ve düşük vergi tahsilatlarıyla sonuçlanması nedeniyle önemlidir; Sonuç olarak, doğrudan yabancı yatırımlar yurtiçi tasarrufları teşvik eder ve kaynak açıklarını kapatmaya veya gidermeye yardımcı olur. Doğrudan yabancı yatırım hem yerleşik hem de büyüyen ekonomiler için kritik öneme sahiptir. Değişkenlerin eş bütünleşmesini değerlendirmek için ARDL kısa ve uzun dönemleri ile ARDL sınır testi yaklaşımı kullanılmıştır. Bağımlılık testi sonuçlarına göre, bağımsız değişkenler ve bağımlı değişken, F istatistiği kullanılırken %1, %5 ve %10 anlamlılık seviyelerinde istatistiksel olarak önemli olan uzun vadeli istatistiksel olarak önemli bir korelasyona sahiptir (16,49816). Sonuç olarak, eş bütünleşmenin var olduğuna dair boş hipotezi reddediyoruz. Ayrıca, DYY ve döviz kuru Nijerya'nın sürdürülebilir kalkınması üzerinde olumsuz bir etkiye sahipken, net ticaret kısa vadede ekonomik kalkınma üzerinde olumlu, uzun vadede ise olumsuz bir etkiye sahiptir. Öte yandan, enflasyon, araştırmanın zaman aralığında Nijerya'nın sürdürülebilir kalkınmasına yardımcı olmuştur. Yerel içerik gerekliliği hükümet tarafından yeniden gözden geçirilmelidir. Kilit ekonomik motor olarak DYY'ye güvenmek yerine, Nijerya hükümeti ve vatandaşları büyümeyi hızlandırmak için daha fazla yerel yatırımı teşvik etmelidir. Nijerya, çok uluslu şirketler için kısıtlayıcı iş yöntemlerini sınırlamak, Nijerya'dan elde ettikleri kârların ülkelerine geri gönderilmesini sınırlamak ve gelirlerinin önemli bir miktarının Nijerya ekonomisine yeniden yatırılmasını sağlamak için bir davranış kuralları çıkarmalıdır. Nijerya'da DYY

ile sürdürülebilir kalkınma arasında açık bir bağlantı olduğu için, hükümet, güvensizliği azaltarak, sosyal kolaylıklar sağlayarak ve Nijerya'da ekonomik ilerleme ile sonuçlanacak diğer gerekli faaliyetleri benimseyerek ülkeye DYY girişlerini gerçekten teşvik edebilir.

Anahtar Kelimeler: DYY, Ekonomik büyüme, Enflasyon, Net ticaret, Döviz kuru, Sürdürülebilir kalkınma

Table of Contents

CHAPTER **I**

CHAPTER II

CHAPTER III

CHAPTER IV

CHAPTER V

List of Tables

List of Fıgures

Abbreviation

ADF: Augmented Dickey-Fuller

ARDL: Auto Regressive Distributed Lag

OLS: Ordinary Least Squares

CBN: Central Bank of Nigeria

ECM: Error Correction Model

FDI: Foreign Direct Investment

GDP: Gross Domestic Product

WTO: World Trade Organization

IMF: International Monetary Fund

GATS: Agreement on Trade and Services

TRIMS: Trade-Related Investment Measures

M&A: Mergers and Acquisitions

MNC: Multinational Companies

UN: United Nations

R&D: Research and development

PC: Phillips Curve

PPP: Purchasing Power Parity

EXR: Exchange Rate

GIPC: Ghana Investment Promotion Centre

NIPC: Nigerian Investment Promotion Commission

LNIC: Liberia National Investment Commission

KIA: Kenya Investment Authority

SNA: System of National Accounts

GNP: Gross National Product

BOP: Balance of Payments

REER: Represent the Real Effective Exchange Rate

EC: Equilibrium Correction

PP: Phillip-Peron

CHAPTER I

1.1 Introduction

It is a widely held belief that FDI plays a cardinal role in encouraging sustainable development and prosperity in countries that are still in the process of sustainable development. The most crucial aspect is the sharing and dissemination of technological knowledge. This is important because the economies of these countries are very small, which results in poor revenue collections; as a result, foreign direct investments promote savings at home and help to close or meet resource gaps. FDI is essential for both well-established and emerging countries.

Foreign direct investment has to do with business investments made in countries other than the investor's own. These investments typically involve the establishment of local manufacturing facilities or the acquisition mergers and acquisitions of an established company (through Greenfield) (Rutherford, 1995: pp 178-179). A nation's sustainable development may be explained as an expansion, in terms of its ability to produce products and services, during a given time span as compared to the previous period. However, over the course of its history, sustainable development has been defined in a variety of works of literature and has gone through a number of transitions and shifts.

Globalization and the economy of the globe can't function properly without FDI. All emerging countries, including Nigeria, rely heavily on FDI. FDI plays a costly and significant influence on the wealth and budgets of developing nations. FDI also plays a critical role as the driver of employment, technological progress, increased productivity, enhanced human capital development, infrastructure development, foreign exchange rate, competitive business climate, investment tax revenue gap, and eventually sustainable development in the organized country. FDI also allows investors to swiftly reduce the Investors may lessen the impact of potential negative outcomes on their portfolios by spreading their holdings across a number of countries (Kleinert, J 2001). FDI is essential to the development of Africa because it has the potential to replenish the continent's domestic savings, stimulate economic growth and job creation, integrate the

continent into the global economy, spread cutting-edge technology, increase productivity, and improve the capabilities of local laborers.

FDI is growing in significance for developing countries, many of which are motivated by the conviction that more FDI would be advantageous to their economies. Foreign direct investment has significant effects on the societies, cultures, economies, and politics of the countries that receive it. The influence that FDI has on the extension of an economy is something that has long been a source of worry for a great number of economists. Investments can only be made using domestic resources in a closed economy since there is no access to capital from other countries. In an open economy, investments are supported not just by domestic savings but also by domestic savings and international capital flows, such as foreign direct investment. China is an excellent example; its experience is unique in that the communist regime maintained a rigid and archaic political structure while also implementing major economic reforms. After America in the 1990s, China became one of the nations that received the most help. Even though China is one of the top receivers of FDI in Asia, the number of such investments is increasing every year.

Because of FDI, countries that are open to it may end up investing more than they are able to save as a result of their economic success. FDI has long since supplanted the most significant sources of capital in emerging countries are government assistance, personal loans, and portfolio equity investments. The proportion of FDI in the percentage of total foreign aid going to developing countries is up from 16% in 1986.to 45% in 1997 2001 (Perkins).

Within the universal, it's widely recognized that a vibrant or stable financial zone is critical to sustainable development economic growth, and stability. The efficiency with which the stock market operates is directly proportional to the financial sectors that underpin budgetary conditions. It is a method of providing assistance to new businesses that are dependent on their potential for success when they first launch. The stock exchange is constantly analyzed and evaluated as part of the process of determining how far along a country is economically and what its potential is. The rise of a country's stock market is a necessary condition for any nation that desires to see increased levels of financing, and savings, in the context of the economy as a whole. Furthermore, in

accordance with the World Bank (2002), developing nations got 36% of all FDI flows in 1997. Most developing nations today regard FDI is an important source of development, notwithstanding the difficulties in assessing or exactly projecting its economic consequences. Numerous studies have demonstrated that FDI has a significant influence on sustainable development in developing countries that host FDI by encouraging the growth of human resources, the diffusion of technology, the accumulation of capital, and the expansion of international trade (World Bank, 2002).

"Sustainable development is essentially symbolic rhetoric, with conflicting interests each redefining term to suit their own political objectives, rather than serving as a powerful basis for policy development in the host country," Andrews (1997) observes and shows. The expansion of many variables, including but not limited to foreign direct investment, political stability, and economic liberalization are only a few factors that affect the stock market. (Gay Jr, et.al 2008).

FDI is a potent tool for both human and economic development. Economic growth may be understood as the increased capacity of an economy to generate services and products when contrasted between two points in time. Real terms, which are inflation-adjusted, or nominal terms, which incorporate inflation, can both be used to quantify sustainable development. The economic expansion rate is a percentage indicator of the state that the economy is in has performed over time. In actuality, it acts as a gauge to measure how quickly a country's gross domestic product changes from one year to the next. If the economy of a country is highly reliant on the salaries that its citizens earn outside the country, another useful metric is the gross national product or GNP. A country that is more economically open to the rest of the world may reap benefits in a variety of forms, one of which is the increased likelihood that it will be exposed to cutting-edge innovations. Only in the context of this study does the term "openness" refer to anything other than "trade openness," which may be explained as the percentage of a nation total real GDP that is made up of that nation exports and imports. FDI may be divided into two primary categories: green-field investments and foreign takeovers (also known as mergers and acquisitions). Greenfield investments, as opposed to foreign takeovers, including building factories from the ground up or establishing firms in nations other than the investor's own foreign takeover, are the process through

which domestic assets are acquired by a foreign entity and placed under its management. It is essential to have an openness to FDI since it represents a case of the least costly methods to integrate a host nation into the global economy. It is essential to have a favorable business climate and to provide equal chances (in terms of taxation, law enforcement, and other areas) for international and local investors if one wants to recruit, retain, and keep up existing levels of foreign investment. To facilitate the participation of international investors in participate in some strategically important areas of their economy, the majority of the African nations have lowered their trade barriers. To improve the free flow of money onto the continent, several African nations have signed numerous trade bilateral agreements.

It is widely acknowledged that the influence of FDI has an effect on sustainable development both directly and indirectly expansion of the home nation economies. In the host country, FDI is directly beneficial to capital, exports, employment, and the development of new technology. (Blomström, et.al 2001). Additionally, the increasing output may give indirect advantages to firms located in the surrounding area (Gorg and Greenaway, 2004). Because of this, there is intense competition among governments to utilize a variety of different types of incentives in order to lure FDI to come into their countries. For instance, a great number of governments, particularly in nations that are still in the process of developing, have put in place measures to attract international investment.

FDI from industrialized countries is appealing to developing nations in part because it may help them acquire cutting-edge technology and so boost their capacity for innovation. It's widely held that innovation is what ultimately drives economic development, which in turn may increase a nation's ability to compete with others. According to the concept of endogenous innovation-driven development proposed by Grossman and Helpman (1991), knowledge spillovers are crucial for a country's economic development. Several experts and decision-makers in the business world have pointed to the capacity to replicate cutting-edge technology used in wealthy countries as a major factor impacting the rate of sustainable development in developing countries (Romer, 1990).

In West Africa, Nigeria is one of the many countries that have an abundance of mineral resources, as well as raw materials like oil and gas, greenery, and their types of flora and fauna. Petroleum dominates the balance of natural resources in Nigeria. It is anticipated that oil reserves will continue to exist for another 30 to 40 years. Even while there are coal reserves in the country, production is still a fraction of what it might be.

Nigeria is the top beneficiary of FDI in West Africa, in accordance with the UNCTAD World Investment Report 2006. It makes up 70% of all FDI in the sub-region and 11% of all FDI in Africa. In Nigeria, the oil sector alone is responsible for 90 percent of the total FDI. It's essential to investigate the factors that attract FDI into Nigeria, particularly in light of the recent uptick in this category of investment. In this age of globalization, the government of Nigeria has developed a variety of strategies to increase the quantity of FDI in the nation (FDI4). To focus on the government in particular, encouraged foreign investment in the industrial sector, liberalized its economy under IMF oversight, and provided incentives for equity ownership across the board, with the exception of crucial industries like the production of military equipment. Incentives for the development of locally sourced raw resources, such as tax exemptions and discounts, might be advantageous to investors. Beginning in the 1980s, Nigeria pursued substantial economic reforms, including a campaign of privatization.

This transition started in 1989 and has been ongoing ever since, and it can be attributed to a number of initiatives that were established by the government of Nigeria. Among these measures are the Structural Adjustment Programmed (enacted in 1986), the Export Processing Zones Decree (1991), and the Investment Promotion Commission (1995). The influx of FDI remained small until the 1990s, when it soared, especially in the 21st century. The export of natural resources with the intention of selling them on the global market is the major objective of FDI that is involved in resource-seeking activities. These activities often have an effect, either directly or indirectly, on the exchange rates of foreign currencies related to the cost structures (or inflation rates) in the regional market. This, in turn, encourages an inflow of FDI by boosting resource exports. All of them have some kind of bearing on the GDP, which measures the whole economy. How crucial are characteristics such as market size, macroeconomic volatility, natural resource endowment, and policies that affect the economy as a whole, such those that

encourage transparency in influencing the amount of foreign direct investment that flows directly into Nigeria, which is a developing country that is struggling with poverty? In the research that has been done so far, only endogenous variables have been taken into account. They may see openness to trade or intensity of trade as an important policy issue that has the potential to impact all other elements. In this context, we also take into consideration the impact that significant trade partners have on the flow of FDI, economic activity, and rates of inflation and exchange GDP. The research reveals more potential routes via with external factors that may have an effect on a single economy. As exogenous factors, the most important trading partners from both the North and the South are taken into account in this article.

Nigeria, after Ethiopia and Egypt, is Africa's third-largest FDI recipient. America, England, China, Germany, the Netherlands, and France are among the countries that have invested in Nigeria. Nigerian FDI flows fell by 21% in 2017 to 3.5 billion US dollars, possibly due to political turbulence, absence of transparency & accountability, widespread bribery, a lack of human capacity development, and poor infrastructure development quality (UNCTAD, 2018). Nigeria is one of the economies in the world with a sizable and expanding market for goods and services, and one that has seen a lot of FDI since crude oil was discovered on its territory.

Over the period from 1970 to 1979, the World Bank estimates that Nigeria's FDI net inflow ratio to GDP averaged 1.579. Yet, the average ratio of FDI net intake to GDP for the years of 1980 and 1989 was 1.947. This resulted in new national records of 8.28 in 1994 and 6.3 in 1993. As of 1993 and 1994, the past performance was no longer a concern. Since 1995, Nigeria has not had its FDI net intake as a commission of GDP goes beyond 4.0 except in 1996, 1997, 2005, and 2009, when it reached records of 4.51, 4.25, 4.44, and 5.08. Global Development Financing 2008 reports that in 2007, Nigeria got $6.03 billion while Thailand received $9.6 billion from the World Bank. Also, the Central Bank of Nigeria reported that the country received $5.99 billion in FDI in 2010. FDI amounted to just $668 million (12.2% of total investment) (FDI). From 2009's $3.31 billion, this is a decline of 78.1%. As a result, many people in Nigeria are left to speculate on what could be behind the nation low level of FDI. Lawmakers and government officials are worried about this. Despite having the eighth-highest

population and the 32nd-largest economy in the world (CIA World Fact Book), Morgan Stanley claims that Nigeria's level of FDI is indifferent when compared to the country's resource-based and prospective demand. If things go well, Nigeria might eventually surpass South Africa as Africa's most populous country. FDI is an important revenue stream for many national governments (OECD, 2008).

The major goal of this research is to determine if or not the European Union has had a role in recent FDI moves that have taken place inside the Nigerian economy. This research probe the connection among FDI and long-term development as part of an effort to advance and rethink the part that FDI plays in Nigeria's long-term development. This article also addresses the issue of limitations placed on foreign investment and makes the argument that in order for Nigeria to maintain its competitive edge in attracting FDI, its laws and regulations need to be simplified so that they are in line with the best practices that are followed globally. On the basis of these presumptions, the purpose of this research is to determine whether FDI assists or competes with indigenous investment in the expansion of the Nigerian economy. The expression "foreign direct investment," or "FDI," refers to a technique that is used by developing nations in order to amass foreign reserves via the use of investments, businesses, and other forms of international aid from industrialized nations. In addition, the results of this research will aid you in comprehending the part that FDI plays in the economies of Nigeria. Is FDI Necessary for Nigeria's Development? What strategies does the government of Nigeria have in place to entice direct investment from abroad? What are some of the benefits and drawbacks of direct investment from other countries in Nigeria? This essay is formatted as follows: The first section contains the introduction. The literature review is presented in Section 2, the data and methods are shown in Section 3, the results and comments are presented in Section 4, and the research is concluded in Section 5.

1.2 Statement of the problem

In point of fact, the economy of Nigeria is nearly as old as the country it serves. Concerns have been expressed, in particular, regarding the level of quality and value of productive investments that have been undertaken since the early 1980s. In 1958,

(Garba, 1958) The primary concerns of this research are the obligations or goals associated with FDI in Nigeria and the promotion of sustainable expansion there. As a consequence of this, the purpose the aim of the research is to investigate the possible associations among sustainable development and FDI in Nigeria.

As a direct result of the policies that have been put into place, the economy of Nigeria has become one of the most rapidly expanding in the world. Even though other researchers contend that FDI might create a balance of payment problems for developing countries, the fact that it is essential for driving economic growth in these nations cannot be overstated. FDI has been proved to have a favorable influence in host nation. For instance, FDI may give this country the much-needed cash, technological skills, and foreign exchange that it so desperately needs. FDI On the other side, some economists and officials say that FDI has a good influence on developing nations, whilst other economists and policymakers argue that FDI has a detrimental impact on developing nations.

1.3 Purpose of the study

The percentage of FDI that a developing country receives and subsequently invests in its export industry is an important measure of the overall health of the economy. When a country accepts foreign direct investment, often known as FDI, it may be easier to transfer managerial, technical, and human resources. According to the World Bank, FDI has a number of additional beneficial effects, including increased productivity and a more highly skilled workforce. This is in addition to the nations' mutual desire to trade technology and information. Furthermore, it provides the country receiving help with the chance to promote its products and services to the rest of the world.

1.4. Research Questions

1. What is the influence of foreign direct investment on sustainable development in Nigeria?
2. When it comes to the Nigerian trade market what part does FDI play?
3. What is the link between FDI and Economy growth of Nigeria?

4. What exactly is the structure, what are the origins, and what are the Consequences of Nigeria's FDI?

5. What kind of realistic benchmarks are being applied to the problem of Nigeria's FDI?

1.5. Research Hypothesis

The following are the null hypothesis and the alternative hypothesis:

Where H1 represents the Alternative Hypothesis and Ho represents the Null Hypothesis:

H1: There is a significant relationship between FDI and the sustainable development of Nigeria

Ho: There is no significant relationship between FDI and the sustainable development of Nigeria.

H2: There is a significant relationship between trade and sustainable development of Nigeria.

Ho: There is no significant relationship between trade and the sustainable development of Nigeria.

H3: There is a significant relationship between exchange and the sustainable development of Nigeria.

Ho: There is no significant relationship between the exchange rate and the sustainable development of Nigeria.

H4: There is a significant relationship between inflation and the sustainable development of Nigeria.

Ho: There is no significant relationship between inflation and the sustainable development of Nigeria.

1.6. Significance of Research

This study will aid policymakers in making informed choices about how to encourage FDI and its associated sustainable development. Both FDI and the economy of developing countries stand to benefit from the findings of this study. Academics and scholars interested in studying FDI and its effects on Nigeria's economy might find this

information useful. The goal of this research is to ascertain whether FDI helps accelerate economic expansion. FDI and the acceleration of environmentally responsible development were the subject of a regression study. Governments and policymakers in Nigeria might use this data to evaluate existing policies about the link between FDI and the country's long-term sustainable development and prosperity.

1.7. Objective of the Study

This research aims to analyze the role of FDI on the growth of the Nigerian economy. It will shed light on the extent of FDI and trade flows into the Nigerian economy and give concrete evidence of their existence. The significance of commerce to Nigeria's development and prosperity will be analyzed. This research aims to learn more about the effects of the Nigerian economy's exchange rate and inflation.

1.8. Contribution to the Study

It is pivotal to have a sympathetic connection link FDI and economy growth in Nigeria, and the findings of prior research will be expanded upon in this thesis.

In the current research, FDI and sustainable development are compared and contrasted to influence which of these two concepts is more important. The substance of the thesis has been modified to exclude some aspects of earlier research conducted in Germany in order to better match it with the anticipated requirements of future study in this country. The work was improved by contributions from both theoretical and empirical fields of study. The latest version looks into whether or not FDI and sustainable development are mutually exclusive or mutually supportive to one another. For the purpose of better aligning the substance of the thesis with the expectations of expected future research in this nation, exclusions from previous research conducted in Germany have been made. The improvements made to this project may be seen in both its theoretical and empirical components.

1.8.1 Theoretical contributions include

Detailed conceptual concepts of FDI and sustainable development.

The formulation of novel lines of theoretical inquiry (also known as research hypotheses) and the justifications for doing so.

Improvements to the conceptual framework that currently underpins existing linkages.

1.8.2 Empirical contributions include:

The empirical contribution of this research will investigate how FDI influences sustainable development in Nigeria. It will investigate a link that has not previously been shown link FDI and sustainable development in Nigeria between the years 1990 and 2020.

1.9 Limitation

There hasn't been any prior study on this subject that is exclusively focused on Nigeria. This research has a limitation in that it mostly includes periods with low predictive power or periods that may not be useful due to their length, despite the large sample size. Due to the fact that research is dependent on data gathered from previous studies as well as work that has already been done in the field. Nigeria in particular, as well as the rest of sub-Saharan Africa, has not had enough of this study done there. Because of this, there isn't adequate study on the subject of how FDI affects Nigeria's economic development. Few studies have been done; therefore it's unclear how FDI affects economic growth. As a result, this study's conclusions could not be applicable to all Nigerians, which is a severe flaw. The following order is used to arrange and modify this research: A summary of the background information relevant to the research that was conducted for the study is given in the first chapter, which serves as an introduction. Additionally, in this chapter are, an explanation of the issue, the goal of the study, the research question, and the research hypothesis, as well as its relevance and its limitations representation of Nigeria's economy from 1990 to 2020 in graphical form.

In the second chapter, a review of the relevant literature is presented, with particular emphasis placed on prior studies that relate to the influence of FDI on the sustainable development of the nation under investigation, Nigeria, as well as other locations all over the world. In this chapter, we will discuss the background of FDI, the concept of FDI, the connection between FDI and sustainable development, the theoretical and

empirical literature, and the discrepancy between the findings of our study and those of earlier research.

1.10. Definition of terms

FDI refers to business investments made in countries other than the investor's own. These investments typically involve the establishment of local manufacturing facilities (H/t Greenfeld) Or by acquiring an existing business via a merger. FDI is when a company based in one nation invests money in a company based in another country, whether the latter is already in existence or has been founded (Jonathan & Colin, 2006). FDI is explained as the flow of capital from nation A into nation B over a period of years. The management, joint venture, technology transfer, and expertize all count as contributions (Shim et al.1995).

Sustainable Development A country's sustainable development may be described as an increase in its total ability to produce goods and services during a certain time period as compared to the prior period.

Gross Domestic Product (GDP) The entire monetary worth of all completed products and services produced inside the boundaries of a country at any one moment is referred to as that nation's gross domestic product, or GDP for short (GDP)). On the other hand, in order to calculate a nation's gross domestic product (GDP), one must first sum up the worth of all of the completed goods and services that are created inside the borders of that nation over the course of a certain amount of time (GDP).

Exports: The goods and services, as well as their respective export values, are detailed in the EXP capture report. It is often believed that increasing a nation's production may be greatly aided by increasing its exports. However, it is believed that exports reduce the number of foreign currency reserves held by an economy since they make it possible to purchase capital goods, which in turn improves GDP. The current amount of commodities is the value of exports that have been sent abroad and has been converted to dollars using the US dollar as the base period's average percentage (2000). (Rwenyagila, 2014).

Neo-classical Theory The theory was familiar during the period between the 1980s and 1990s. It was devoted to the beneficial functions of open economies, free markets, and

the privatization of pointless state programs. It has also been suggested that too intrusive government regulation and meddling in the economy is to blame for the failure of certain economies to grow. The three techniques propagated by the neoclassical counter-revolution economists are the free market, the new political economy, and the market-friendly method. Each technique aimed to disprove the global reliance paradigm. Robert Solow, who emphasized the significance of capital accumulation via saving, investing, and other means, created the neoclassical growth theory.

Gross National Product (GNP) is the value of all goods and services that are produced by people of a nation in a given years' worth of accounting cycles. The gross national product (GNP) of a nation is increased by each and every one of its businesses, regardless of where they are located.

Exchange Rate The rate at which one form of money may be exchanged for another form of currency is referred to as the exchange rate. To put it more simply, it is used in the process of converting one currency into another while simultaneously addressing problems associated to the foreign exchange market. According to Giancarlo (1998), the cost of comparing one currency to another is referred to as the exchange rate. This explanation was provided by Giancarlo.

Trade: International Trade- the exchange of goods and services across several nations is the most fundamental definition of what is meant by the phrase "international trade." It is therefore involved with the import and export of a range of goods and services. One benefit of commerce between nations is that it promotes manufacturing specialization, which raises productivity. Additionally, commerce between nations promotes technological advancement and boosts economic activity. To maintain track of the current state of international trade, the nations, their governments, and the international organizations that represent them all keep track of the transactions that are recorded in the balance of payment accounts with one another. When comparing the economies of different countries and examining how different nations interact, the balance of payments and international trade are the two most important factors to analyze (Melitz, et.al 2018).

Inflation: Inflation, which may be described as the general rate of wealth in the prices of goods and services across a whole economic system, is a source of worry for

everyone who has an interest in the problem. Even if there are no jolts to the economy, inflation has a tendency to repeat itself from one era to the next (for further information, see Novaes 1993, Durevall 1999, and Campêlo and Cribari-Neto 2003). This kind of thing happens rather often. In other words, inertial inflation is when prices continue to rise as a result of previous inflation, despite the fact that there are no fundamental reasons for prices to continue growing in this manner. This is because inertial inflation occurs when prices continue to rise as a result of previous inflation.

The paramount of inflation may be seen through the lens of the potential distortions that excessive inflation may cause in domestic macroeconomic conditions. The path that the economy is on toward long-term sustainable development and development is in danger of being derailed as a result of these distortions. These misunderstandings are the foundation upon which the paramount of inflation is built. Inflation has a negative influence not only on the overall rate of sustainable development, but also on the growth of the financial sector and on the most vulnerable individuals, which further entrenches them in poverty. In addition to this, it creates an atmosphere of uncertainty, which makes people less likely to save money and more likely to spend their money, which poses a big risk to the stability of the macroeconomy and has enormous implications for society. Greenidge and Dacosta (2009

Nearly all national central banks agree that monetary policy's first priority should be to keep prices stable. That's because inflation does so much damage to the economy. This means that the Nigerian government will continue to prioritize price stability over other monetary policy goals. There are several reasons why monetary policymakers should prioritize price stability. For the sake of long-term economic growth and development, as well as to increase the buying power of the national currency, these goals are important. In light of this, it is crucial to learn what factors contribute to inflation.

CHAPTER II

LITERATURE REVIEW

2.1. Introduction

Over the last several decades, FID has been more discussed among academic communities interested in how economies grow and evolve. Many studies have been conducted in both advanced economies and developing nations to identify the factors that contribute to economic growth (Akinlo, 2004). FDI is a key factor in sustainable expansion, particularly in emerging nations. This chapter provides a thorough analysis of research that is important to the study of FDI. The conceptual framework, a short history of FDI in Nigeria, the idea of sustainable expansion, the relationship between FDI and economic development, the theoretical framework, and a review of empirical research are all covered in this chapter's analysis of relevant literature. The chapter presents a comprehensive analysis of the part that FDI plays in promoting long-term sustainable expansion. FDI and the literature around it have been the topic of several academic studies. A lot of data is available about FDI. Here is a rundown of some of the most paramont prior studies that must be taken into account with this new inquiry.

2.2 The Background of FDI in History

According to some accounts, late nineteenth-century FDI had its beginnings. Many of the great vertically integrated multinational corporations that are known today as colonial plantation companies were established during the Victorian and Edwardian eras. These companies include Lever Brothers, which invested in the vegetable oil plantations of West Africa; Cadbury's, which produced cocoa; and Dunlop, which produced rubber. In 1914, the United Kingdom was the dominant imperial poor in the globe. As a result, it dominated international commerce and was responsible for roughly 45% of all FDI. After Globe War II, the United States took control of FDI, and American corporations such as IBM, Ford Chrysler, and General Motors constructed production plants all over the world. By 1960, the United States was responsible for about 48% of all worldwide investments. Nevertheless, Japan has made a significant entrance into the theatre of world affairs. In the course of 1960, less than one percent of the total FDI that had been accumulated in the universal was contributed by Japanese

corporations. In 1989, Japan's share was over 12%, which was much higher than the America 29.5% and London 15% respectively. During the 1990s, there was a dramatic shift in the pattern of FDI. This is because a substantial change has occurred rise in levels of FDI, which in the 1980s only reached levels of 15% to 18%. The majority of FDI, on the other hand, was invested in the Asia-Pacific region. America, England, and Japan were among the key countries that contributed to this substantial amount of investment from the outside (Buckley, 2000:356).

2.3 The Concept of FDI

Direct investments and indirect investments are the two primary components that come together to form the whole of an organization's portfolio of overseas investments. The movement of funds by indirect foreign investors takes place via a number of different intermediate markets and organizations, such as bank loans and capital markets. These investors are not taking part in the transaction themselves in any direct capacity (stock exchanges, bond markets, and so on). When a company receives long-term investments from direct foreign investors, such investors are granted some level of direct control over the management and financial operations of the company in which they have invested. This authority encompasses the whole of the firm. This impact might have either a beneficial or negative effect on the situation. This is an illustration of what is known as "foreign direct investment" (also known as FDI).

In the long term, nations who are fortunate enough to attract FDI could benefit. FDI is referred to as the transfer of long-term capital into a foreign host country by a foreign investor. This definition comes from the IMF. This transfer signifies a dedication to the production process as well as the management of a wide variety of activities over a lengthy period of time. This is a huge investment that will provide considerable returns for the country that chooses to host it. These benefits include an increase in capital and productive assets, the encouragement of an entrepreneurial spirit among locals, improved skills, increased export, upgraded marketing expertise, improved access to a wider range of international markets, the transfer of managerial skills, cutting-edge technologies, and innovative skills, and an increase in exports. One of the advantages that contributes to the economy being stronger and more robust, which ultimately results

in more wealth, is the creation of new job opportunities (Moosa, 2002; Asiedu, 2002; Dunning, 1983). During the course of this investigation, FDI will be referred to as "a long-term investment in a country that is different from that of the investors, and under the direct supervision and control of the investors."

2.4 Theoretical Literature Review

2.4.1 FDI and Policies

Because of the importance that foreign direct investment plays in the overall economy, both national and regional governments are obligated to take it into account when formulating policy. The astounding growth in foreign direct investment has far-reaching implications for policy. There is a global agreement that FDI is beneficial to economies on a national and global scale; nevertheless, the regulations that regulate FDI do not place a primary emphasis on encouraging it. Therefore, the dynamics of foreign direct investment may also be analyzed from the standpoint of policy. The two primary pillars of FDI policy are liberalization and restriction or control. When choosing whether or not to restrict or liberalize FDI, a country's sustainable objectives, the perceived effect of FDI from a social and political stand point, and, more lately, concerns about the nation's security all need to be taken into consideration.

2.4.2 Global trends in FDI policies in Nigeria

During the 1980s, there was a discernible upward trend in terms of FDI, and this pattern has been extensively covered in the media as a result of the significant part that it has played in the expansion and development of the economy on a worldwide scale. The political power of multinational businesses has grown to the point that it is now comparable to, and in some cases even greater than, that of several sovereign governments. As a direct consequence of this, governments and international organizations at all levels have been carefully monitoring the operations of MNCs in order to evaluate the benefits and drawbacks of their activities. Since there is a general agreement amongst specialists from other countries that both the investor's home country and the nation that is receiving the investment may profit from FDI, policies that are designed to promote FDI should be as liberal as possible. On the other hand,

national governments have developed differing degrees of regulatory supervision at different periods and in different places owing to tiredness and worry about the long-term repercussions for the countries that are hosts. These adjustments were performed at a variety of different points throughout time.

The wave of liberalization that occurred in the 1980s had the overarching goal of increasing institutional efficiency. This was to be accomplished by contracting the size of the public sector and expanding the size of the private sector. This expansion of the private sector included opening the door to both foreign direct investment and competition. This movement was fueled by the desire to improve the efficiency of existing institutions, and it received backing from international organizations like the IMF and the World Bank. As a direct consequence of this, a great number of nations, especially more recent ones, have adopted universal standards. These principles include prohibitions against nationalization, assurances of equitable treatment, and defenses for the legal rights of companies already in existence (UNCTAD-WIR, 1993). Throughout the 1990s, a number of countries established investment promotion agencies, sometimes known as IPAs, in an effort to entice foreign direct investment (FDI) by pitching the advantages of their local areas to organizations that might contribute funding. The widespread implementation of free market economic systems in Europe, the widespread belief that foreign direct investment (FDI) has enormously positive effects, and the increasing level of regional connectivity among European governments have all contributed to the liberalization push (UNCTAD-WIR, 1991, 1992, 1993). In the 1980s and early 1990s, the nations of Africa and Central and Eastern Europe were at the forefront of efforts to encourage FDI by providing investors with a wide variety of tax breaks and other benefits. These nations are now at the forefront of efforts to liberalize their respective economies (UNCTAD-WIR, 1995). The enactment of the Namibian Foreign Investment Act in the year 1990 is a perfect example of a technique that may be applied to attract FDI. This law was passed in Namibia. This act opened the door for foreign direct investment (FDI) across the board.

2.4.3 The Importance of FDI

According to IMF and the OECD, the purpose of FDI is to develop a long-term ownership share in a business with its headquarters in another economy, a direct investor who is based in one nation must do so (the direct investment enterprise).

A direct investor and another direct investment might build a strategic collaboration for the long-run business that substantially impacts the operations of the latter; this is an exception to the norm (Duce & Espaa) (2003).

According to UNCTAD, there was a school of thought that held the belief that FDI might have a negative influence on the economies of emerging nation (2000). Afterward more than forty years of continued economic expansion, this perception shifted. During the last 20 years, there has been a tremendous rise in FDI all over the world.

In the twenty-first century, globalization and openness are growing, which is causing FDI to increase. Since FDI is now seen to be positive on the whole, practically every government is working to establish a climate that is receptive to investment. Countries are becoming increasingly aware of their capacity to influence the recruitment of FDI via both broad economic policies and more targeted FDI policies. The IMF claims that one of the most important methods of transferring technology has been FDI.

The harmful repercussions of a lack of long-term economic policy were investigated by Canh, and Schinckus (2020) who analyzed 21 economies from throughout the world. The study's results suggest that uncertainty in 143 nations' economic policies may encourage FDI entrance to the nation. The relationship among terrorism, FDI, & environmental degradation was examined by Bildiricia and Gokmenoglu in 2020. Data from Nigeria, Afghanistan, Iraq and other locations were used.

They made an attempt to design new trade, import, and export regulations and procedures so that they might benefit from the event while minimizing the economic damage it may do. They quickly caused one to become aware of the fact that majority of the link between FDI and development in a nation may be attributed to FDI. In the beginning, governments began establishing policies along this line by increasing the number of local workers who received training to enhance the technical expertise and assimilation capacity of local staff.

Because a considerable increase in the rate of return is possible, FDI has emerged as an issue of critical significance. The purpose of the theoretical framework that was used in this investigation was to make relevant assumptions in order to demonstrate how the term developed through time. The following section presents an organizational framework for the multiple debates, theoretical frameworks, and empirical investigations that various academics have conducted on the topic.

2.4.4 Different Types of FDI

Various researches have differentiated between numerous types of FDI depending on the viewpoint being studied and other particular purposes. For the objectives of this research, the three main types of FDI are joint ventures, mergers and acquisitions (M&A), and Greenfield investments.

2.4.5 Greenfield Investments

When multinational corporations increase their total investment or establish new production facilities in the nation that is hosting them, this type of investment is referred to as a Greenfield investment. Greenfield investments can only occur in countries that have not previously hosted multinational corporations. Greenfield investments are a particularly favorable sort of foreign capital for the nations that function as hosts. Greenfield investments make up the bulk of a host nation's promotional activities, which are primarily focused on attracting new businesses. This is because Greenfield investments have the potential to result in new production capacity, employment possibilities, and the transfer of knowledge, all of which are discussed more below. When it comes to human capital, Greenfield foreign direct investment often results in an improvement in productivity in addition to the development of new employment opportunities. Even if the nation in which one resides has a policy that encourages Greenfield investments and gives them a warm welcome, important to keep in mind that these investments may result in the closure of local businesses, particularly in specific sectors (especially those that rely on technology). Although locally-based businesses often spend their profits in the nations in which they do business, global enterprises that are engaged in Greenfield ventures may not always follow this practice. The high

unemployment rate in Kosovo makes foreign direct investment (FDI) of any sort, including this particular kind of FDI or any of the linked subtypes of FDI, very valuable in the current situation.

2.4.6 Mergers and Acquisitions (M&A)

When existing assets are moved from local corporations to foreign companies, it is common to practice for businesses to engage in the practice of mergers and acquisitions, often known as M&A. To put it another way, by merging the operations and resources of companies hailing from a variety of countries, a brand-new legitimate corporation is born. It is reasonable to assume that less developed nations would have fewer merger prospects and acquisitions to take place. According to the findings of IPAK's 2012 Annual Study on Perception of FDI, "M&A give no long-term advantages to the local economy." This is due to the fact that in the majority of mergers the acquiring company pays the local business's proprietors with shares. This suggests that the proceeds of the transaction may never make it to the regional economy.

The many benefits of this kind of FDI include the following: most often highlighted is enhanced employee productivity; however, there is no evidence to suggest greater employment as a result of this type of FDI. The findings of empirical research carry out in this field are inconsistent and do not provide a clear answer.

2.4.7 Joint Ventures

When existing assets are moved from local corporations to foreign companies, it is common practice for businesses to engage in the practice of mergers and acquisitions, often known as M&A. To put it another way, by merging the operations and resources of companies hailing from a variety of countries, a brand-new legitimate corporation is born. It is reasonable to assume that countries with lower levels of development would have fewer opportunities for mergers and acquisitions to take place. According to the findings of IPAK's 2012 Annual Study on Perception of FDI, "M&A give no long-term advantages to the local economy

2.4.8 Important Characteristics of FDI

a) The difference between projected investments and locally available savings may be closed with the aid of overseas funding. The lack of development in local capital markets is a prevalent issue. They are thus unable to finance significant investment projects. Additionally, it could be difficult to get the real money needed to buy investment items that are unavailable locally. As a direct source of foreign currency, FDI solves both of these difficulties at once. It has the capacity to cover both targeted and net export revenue-derived foreign currency needs.

b) Critical resources including management know-how, entrepreneurial prowess, and organizational/technical competencies may be offered through foreign investment. Emerging economies get machinery and equipment from foreign investment as well as technology and knowledge. Since investment products often incorporate cutting-edge technology, FDI is capable of fixing all problems.

c) Foreign investment might assist emerging countries in creating employment in modern industries.

d) By decreasing costs, raising the quality of products, and introducing new things, it may help consumers in LDCs.

e) Foreign investment may encourage domestic investment via links both forward and backward. For instance, the output of a foreign company may be seen as an input for the regional industry. Similar to this, domestic firms' goods may act as inputs for international ones. If so, foreign firms fuel demand for industries that provide the goods they want.

2.4.9 Review of FDI Theories

As a consequence of theoretical study on FDI, new research domains in economic theory have been able to open up as a result of a clearer understanding both at the small- and large-scales of how economic activity is carried out and how its participants behave. In order to have an understanding of FDI, one must know how to recognize and appreciate the most important FDI theoretical trends, in addition to the historical environment in which these ideas developed and the underlying assumptions that underpin them. The following are some categories that may be used to classify different FDI theories:

2.4.10 Classical Theory

According to the traditional conception, FDI and multinational companies (MNCs) support the extension of host nations' economies in a variety of ways. These include the interchange of money, the acquisition of cutting-edge equipment and expertise, the extension of the tax base, betterment in the money flow balance, the creation of new jobs, increased profits in foreign currency, and the incorporation of the economy of the host country into global markets are all desirable outcomes. These claims on FDI have been backed by the astonishing economic growth of newly industrialized countries, Most notably, throughout the 1980s and early 1990s (Muchlinski 1995 and Umar 1980) and, more recently, by China's phenomenal economic growth. Countries like Hong Kong, Taiwan, Singapore, and South Korea fall within this group.

The UN, the World Bank, and the IMF are just some of the international bodies and organizations that have expressed support for the classical idea in recent years. Places a strong emphasis on FDI while also advocating for minimal involvement on the part of the government (IMF).

2.4.11 Neoclassical Economic Theory of FDI

It is often believed that FDI is beneficial to both the economy and the people of the nation in which it is founded. Together, Bergsten et al (1978). One piece of data that lends credence to this theory is the influence that inflows of money from overseas investments have on both the rate and the quality of new capital creation in the nation that is the beneficiary of those investments. The growth of national savings may be attributed, in part, to both the inflow of new capital and the recycling of existing earnings. Governments are able to grow with the assistance of financial support from taxpayers and other sources Seid (2002). The injection of foreign cash into the economy of the country that is hosting the event helps to lessen the effect on the balance of payments caused by the event. According to Kojima (1978), FDI is beneficial to advance nation because it imparts expertise in the areas of technology, management, marketing, market intelligence, organizational experience, and worker training to these countries. The objective is to bring manufacturing technology from less developed

countries up to the same level as that of highly industrialized ones. The neoclassical hypothesis has a second line of defense in the form of this argument. Multinational corporations have the potential to perform a crucial part in the transfer of technological know-how from industrialized nations to underdeveloped nation by way of the foreign subsidiaries they maintain. When calculating the overall welfare benefit for developing nations, one of the most crucial elements to consider is the local adoption rate of new technology. According to Antonelli (1995), the price at which a technology is adopted is dependent on a wide range of diverse topics and subjects. These aspects consist of the availability of technological knowledge, the cost of qualified staff, the cost of technical support and maintenance, the cost of supplementary gear and software, as well as the availability of complementary organizational and technological advancements. Unfortunately, owing to the lack of available resources in developing nations, economic growth still necessitates the commitment of significant amounts of money. Furthermore, Kojima (1978) and the Bureau of Industry Economics (1995) believe, in accordance with proponents of neoclassical theory, that FDI increases competitiveness in industries where there is potential for the creation of new products.

An increase in competition may result in improved resource allocation, a more efficient use of capital, and the elimination of management methods that are wasteful. Increased access to international markets afforded by FDI in the industry of the nation that is hosting the investment may result in a higher demand for locally produced products. As a direct consequence of this, there will be more possibilities to exchange information, which will, in turn, result in higher overall levels of competitiveness. The Division of Economic Analysis of Industries of the United States Department of Commerce (1995). There is consensus among the researchers Sornarajah (1994), and Bergten et al. (1978) that FDI improves the balance of payments of the nation that receives it. This is due to the fact that FDI changes the distribution of income, generates foreign currency, and creates new employment opportunities. Even further, international financial institutions would construct and modernize infrastructural facilities. According to Sornarajah (1994), the facilities would be beneficial for the economy as a whole if they were implemented.

According to neoclassical economics, as stated in the Guidelines on the Treatment of FDI, an increase in direct investment flows has a paramount positive influence on the global economy, and the economies of developing nations in particular, by increasing competition, transferring capital as well as managerial skills and expertise, improving market access, and improving the long-term efficiency of the host country. This is because an increase in direct investment flows has a paramount positive influence on the global economy, and the economies of developing nations in particular. According to Kennedy (2000), the host nation's level of confidence in its ability to increase the economic benefits it obtains from FDI without resorting to nationalization grows as the level of the nation's managerial, technical, and administrative capabilities rises.

2.4.12 The Dependency Theory

Drawing on the history of Latin America, proponents of this theory claim that free trade and partnerships with rich nations in terms of foreign investment mostly contribute to the underdevelopment and exploitation of poor countries' economies (Wilham and Witter, 1998). This approach places a significant amount of focus on the connection that exists between the core and the surrounding areas. The countries that are the most industrialized and developed are thought of as being in the center, while the nations that are the least developed are thought of as being on the perimeter. FDI is seen as a conduit in this framework, through which the center exploits the peripheral, so maintaining the periphery in a position of dependence and underdevelopment.

Instead of fostering economic expansion, investment from outside the country tends to impede it, and it helps to ensure that weaker governments remain in power (Somarazah, 1994). Some people believe multinational corporations engage in exploitative behavior. The fact that multinational businesses have often participated in resource exploitation despite there being no comparable gains for host economies is the primary factor that influences these attitudes (UNCTAD, 1999). The "extractive quality" of FDI was the primary impetus behind the development of the reliance theory.

2.4.13 International Production Theory

The international production theory, which is also often referred to as the FDI theory, may be broken down into two basic literary groupings as its fundamental

component. Hymer (1976) and Caves (1974) were the progenitors of one school of thought. In their opinion, FDI is an obvious attempt to reap financial benefits from another country's market, and they proposed that businesses with some kind of intangible asset participate in FDI. Hymer and Caves established this school of thought. These companies spend their money in other countries so that they may take advantage of the one-of-a-kind ownership advantage that is supplied as a non-tangible asset. The oppositional team, commanded by Vernon (1966), held the belief that foreign direct investment was nothing more than a defensive strategy that companies used to protect their export markets. These markets could be in jeopardy due to competition from other businesses operating in the same geographic area, or they could be in jeopardy due to unfavorable shifts in the domestic macroeconomic environment, such as rising wages or an appreciating currency. Defensive foreign direct investment is typically made in low-wage nations because affordable labor costs enable investors to cut their production costs and remain internationally competitive. While aggressive foreign direct investment can be in any nation where it is believed that the greatest strategy for entering the market is via local manufacture, defensive foreign direct investment is typically made in low-wage nations. In point of fact, it may be difficult to differentiate between the two given that FDI might be carried out for a range of reasons, including the pursuit of the market and cost-seeking goals, respectively. We assess both of the two primary categories of research, in addition to adding in order to provide a full picture of FDI notions that may be found in the corpus of current academic work, research on FDI are being conducted.

2.4.14 The Intervention/Integration/Middle Path Theory

The interventionist or integrative school attempts to look at FDI from both the host nation's and the investor's viewpoints. It takes into account both traditionalists' and dependency theorists' arguments. The idea is that foreign investment should be safeguarded, but only if it benefits the host country and if foreign investors have behaved responsibly by promoting the political, economic, and social objectives of the organize nation. Only in these circumstances should foreign investment be protected. When it comes to dealing with international investment, this strategy recommends avoiding excessive regulation or meddling and calling for a healthy balance between

openness and intervention (Seid, 2002). According to the theory, there are instances in which the free market is in a superior position to respond to a situation, while other scenarios call for the participation of the government. As a result, a delicate balance must be struck between the responsibilities that are best handled by the market and those that the government is capable of handling.

This theory demonstrates how Adam Smith's argument for laissez-faire and John Maynard Keynes's rationale for government intervention are consistent with one another.

Additional theories include the eclectic paradigm Vernon's idea of the manufacturing cycle, often known as globalization, and the industrial organization paradigm.

2.4.15 Production Cycle Theory of Vernon

Following the conclusion of World War II, American corporations in Western Europe participated in a variety of kinds of FDI inside the manufacturing sector. Vernon's 1966 production cycle theory was used in order to provide an explanation for these investments. The proposal makes an attempt to include all three stages of production in order to provide a complete description of the course of a product's life. The debut of innovation is the primary emphasis of the first phase of this methodology. It is speculated that the countries that bring in the most money and have the most talented people will be the ones to come up with new products, produce them, and then sell them. If a prosperous market agrees to buy the items, manufacturing will increase while additional markets will be researched and exported in greater quantities. At this moment, the second stage, often known as the mature stage, officially starts. Presently, there is not much price elasticity in consumer product need or want. In response to the market's rising demand, global market has led to there are now more competitors. The original manufacturer decides to construct a production facility in the country so that they can satisfy the growing demand from other countries and stay competitive with other producers. The second stage of the company's development is when it begins to expand into other countries. The culmination of this step is the standardization of the product. The manufacturing process reaches its zenith and gains widespread notoriety. As a direct result of this, investment moves to any part of the world that has the most

competitive cost structure. After that, the product is sent back to the country in which it was first developed so that it may be progressively phased out of production to allow place for the development of a new product. When it gets to this phase in the manufacturing process, the exporter becomes the importer. This hypothesis does not adequately explain why a company would benefit more from engaging in FDI as opposed to continuing to export its goods internationally or contracting with a foreign company to manufacture those goods. Rather than exporting its goods internationally or hiring a foreign company to manufacture them. It only says that foreign direct investment will take place anytime the size of a foreign market can sustain home output. It does not, however, indicate when it is advantageous to make investments on a global scale.

2.4.16 Internalization Theory of FDI

Buckley and Casson (1976) provided an alternative explanation for FDI, one that focused on technological and intermediate inputs rather than on the traditional factors of production. When it comes to foreign direct investment (FDI), they shifted the focus from the nation-state to the industry and corporate levels (Henisz, 2003). Buckley and Casson analyzed multinational corporations using Coase's broad framework (1937). They presented a hypothesis that was later referred to as the internalization theory, which got its name from the fact that they emphasized this problem in connection to the growth of MNCs. They based the development of their argument on the following three tenets:

a) Companies want to maximize profits in unfavorable markets.

b) When external markets for intermediate goods are ineffective, creating internal markets is sought as a remedy.

c) Internalization of international markets led to the development of multinational corporations.

Research and development are activities that may result in the production of novel inputs, processes, or technologies by a corporation. It may be difficult to sell inputs or transfer technology to unrelated firms because they could believe that the transaction costs are too high. As a consequence, selling inputs could be difficult.

A company may choose to use backward and forward integration in this scenario to internalize its activities. This means that other firms may utilize a company's technology, or that a subsidiary's output may be used as a raw material for another subsidiary's manufacturing. When operations are carried out across many countries, internalization necessarily results in FDI. In 1976, there are five potential market flaws that might lead to internalization, according to Buckley and Casson. Due to the fact that (a) it takes time to coordinate resources and (b) discriminatory pricing is necessary for the well planned use of the market, a bilateral monopoly causes unstable bargaining situations, dominance, (c) a buyer is unable to accurately estimate the price of the goods that are being sold, and (d) and (e) government interventions in international markets encourage transfer pricing. Buckley and Carson's were aware of the prospect of meddling by the host government, but they neglected to take into consideration how variable this risk was depending on the industry.

2.4.17 Industrial Organization Approach

It was one of the first studies to explain worldwide production in the context of a flawed market. According to Hymer's idea, international businesses that want to succeed must compete with local businesses that have an edge over them due to factors like culture, language, legal system, and customer preferences. Overseas currency risk is also a concern for foreign businesses. To make the overseas investment viable, some kind of market power must be used to counteract these drawbacks. The sources of market dominance, also known as a firm-specific advantage or monopolistic advantage in Kindle Berger's terminology, include better technology that is protected by patents, brand awareness, management expertise, scale savings, and more reasonably priced sources of financing. The most significant benefit, in Hymer's opinion, is technical dominance since it makes it easier to provide new goods with novel features.

Additionally, information aids in the development of other talents like marketing and enhanced manufacturing methods. Because of this, businesses are able to use their market dominance to invest overseas and make significant returns. According to

Sodersten (1970), the major drivers of direct investment were the desire to maximize earnings by using technical or organizational advantages.

2.4.18 FDI and Economic Growth: A Theoretical Relationship

Findlay (1978) modified Solow's model and expected that an increasing component in FDI was the pace of technological diffusion. Using domestic capital (from a developing country) and foreign capital as inputs, he contends that a rise in foreign investment would promote domestic investment (a developed country). However, he discovers that both the amount of FDI in the overall stock of capital and the rate of technology transfer in a developing nation is deteriorating functions nation.

(Mankiw, et.al1992) made further modifications to Solow's model. They Capital accumulation denial was argued to result in lead to erroneous calculations of the coefficients for saving and population increase. These modifications were made in response to Solow's work from the previous decade. They claimed that differences in nations' incomes on a per-capita basis were the cause of differences in the rates of monetary saving, the rates of natural population increase, and the levels of monetary output generated by labor.

Romer (1986) is credited with developing the endogenous growth hypothesis, which postulates that a manufacturing process would be sensitive to the emergence of technical advances. According to Helpman (2004), the endogenous growth theory emphasized two key ways that investments can influence economic growth: first, by influencing the variety of commodities that are available, and second, by influencing the body of knowledge that is accessible for research and development. Both of these factors can have an influence on the sustainable development of a nation (R&D).

According to Grossman and Helpman, an increase in the levels of competition and innovation will result in the creation of new technologies, an improvement in worker productivity, and, eventually, support for economic growth (1991). According to Romer (1990), economic progress is encouraged by FDI, which helps to increase human capital, which is the most important component in R&D operations. In contrast to these optimistic findings, Reis (2001) developed a model to investigate the influence of FDI on economic development while taking into consideration the possibility of repatriating

investment profits. It is a fear of hers that if it were easier to secure FDI, local businesses in the field of research and development would be supplanted by international corporations. If more cash is returned to firms that are operating overseas, this may have a negative effect on the growth of the home economy. According to this model, the impact that FDI has on the growth of GDP is proportionate to the magnitude of the effects that are caused by fluctuations in interest rates. FDI will have a negative effect on GDP if the interest rate on overseas investments is greater than the interest rate on local investments. When local interest rates are higher than international interest rates, foreign direct investment tends to be less attractive. This can be detrimental to sustainable development.

In addition, Firebaugh (1992) provides a range of different arguments for why FDI inflows might be less beneficial and potentially more destructive than domestic investment. These justifications are offered to explain why FDI could compete with domestic investment. It is possible that the country will not benefit as much from FDI inflows as it would from domestic investment due to the fact that multinational corporations are less likely to increase government revenue, encourages local entrepreneurship, reinvests profits, builds relationships with domestic businesses, and use inappropriately capital-intensive techniques. Foreign direct investment might be harmful if it "crowds out" local enterprises and encourages unfavorable spending patterns among consumers.

2.5 Empirical Literature
2.5.1 FDI and Economic Growth nexus

Everyone agrees that FDI is beneficial to the success of domestic businesses because it encourages expansion, which in turn increases both efficiency and production. All industrialized nations agree that productivity is one of the most paramount elements in determining the level of financial success that local businesses have been able to attain in their own countries. Some people have the misconception that FDI is only used for the purpose of making investments, while others feel that its contribution to the expansion of exports is unknown. It is generally accepted that the degree to which FDI trickles down into the host country is proportional to the degree to

which the host nation is able to successfully incorporate the particular kind of investment and the foreign technology. It is generally agreed upon that the nation that FDI is now passing through has some weight in determining the nature of the connection between FDI and sustainable development. It has been hypothesized that the political, social, and economic environment of the nation that is the recipient of FDI has a paramount influence in determining the magnitude of the contribution that FDI makes to the development of that nation's economy (Zhang, 2001).

The Granger causality test was utilized by Olumuyiwa (2013) in his research on the influence of foreign FDI inflows on sustainable development in a pre- and post-deregulates Nigerian economy from 1970 to 2010. The time period under investigation was from 1970 to 2010. He came to the conclusion that during the pre-deregulation era (1970-1986), there was a causal relationship between economic growth (GDP) and FDI inflows, but that this association does not exist during the deregulation era (1987-present). Despite this, research carried out between 1970 and 2010 reveals a causal association between economic growth (GDP) and the inflow of FDI. To put it another way, foreign direct investment (FDI) in a country is primarily motivated by the level of economic success that exists inside that country, and vice versa.

The Importance of FDI in Speeding up sustainable development in Nigeria: A Reevaluation was the title of their article that was published in 2013. Matthew and Johnson came to the conclusion using the ordinary least square (OLS) approach that domestic savings and foreign direct investment both substantially contribute to Nigeria's rising economy. In order to reach this result, Matthew and Johnson employed the OLS method. In a separate piece of study that they carried out on the subject in Nigeria, they came to the conclusion that foreign direct investment (FDI) had a beneficial effect on the rate of employment creation in the country. In addition, the Augmented Dickey-Fuller (ADF) unit root test, the Granger test, the Dickey-Fuller unit root test, and the conventional least square regression technique were all utilized in this work.

Ordinary least square regression was employed by Onuoha and Oregwu (2013) to study the link among FDI and sustainable development in Nigeria. Based on their findings, they concluded that GDP had no influence on FDI. There is a positive link among FDI, transportation, and communication, but trade openness is seldom meaningful.

Using the ordinary least square, the ADF unit root test, and the Johansen co-integration test, Adaramolo and Obisesan (2015) discovered that FDI has a positive and significant effect on market capitalisation. The findings of their inquiry on the role of FDI in the growth of the Nigerian capital market revealed this.

Gastanga et al. (1998) analyze the impact of a variety of policies on the amount of money that citizens of other nations bring into a country as a direct result of investments made in that country. The eclectic theory of international investment, which emphasizes the benefits of foreign ownership, the area of the organize nation, and globalization, serves as the foundation for the strategy that they have devised. Investigations of FDI were carried out by Wheeler and Mody (1992) as well as Hines (1993). (1995) take into account a variety of institutional issues. Some of these considerations include host country risk and corruption FDI. Although Tsai (1994) acknowledges that a qualitative approach is essential, he does not give any further information or clarification on this particular issue. Asiedu (2002, 2006) looks at a variety of elements to see how they influence the flow of FDI, some of which include natural resources, market size, and the investment strategy of the host nation, political unrest, and corruption FDI. Asiedu (2006) investigates the variables that affect FDI in Africa. She believes that political instability and corruption have the opposite effect of low inflation and an efficient legal system, which are both factors that favor FDI.

2.5.2 Inflation and Sustainable Development nexus

An economy is said to be experiencing inflation when there is a period of time in which the overall price level of products and services in the economy is regularly and continually rising. Inflation is a problem that has to be addressed in many economies all over the world. It's possible that this is because their economies are located in a variety of different areas at a variety of different periods owing to a variety of different factors and for a variety of different amounts of time. It's sufficient to remark that price rises occur in all types of economies, developed, emergent, and others. However, although some economies may see just temporary fluctuations, others are likely to experience consistent and persistent price increases.

Meanwhile, the economies of a number of countries are expanding despite the current upward trend in prices. Inflation has been beneficial for the economy of this country. However, inflation may also cause a recession in some countries. Inflation is out of control in this group of countries and is having a devastating effect on their economy. Economic growth and rising prices are both signs of progress in Nigeria's economy.

According to Fatukasi (2012), the majority of Nigerians, who are either on fixed wages or unemployed, have not seen their standard of living improve despite the government of Nigeria's various efforts to lower inflation. Consequently, he went on to say, investment productivity, the trade deficit, and GDP growth will all suffer (GDP).

The link between inflation and expansion is still unclear, according to both theoretical and empirical research. The major focus of theoretical models that analyze the effects of inflation on economic growth is on the effects of inflation on investment and output in the steady state. Theoretically, there is a wide range of outcomes associated with the correlation between inflation and sustainable development. These associations might be linear, nonlinear, constructive, or neutral between the two variables. The first result is based on studies conducted by Mundell and Tobin (1963), which discovered that inflation is correlated with sustainable development.

IS-LM curves were initially used by Mundell (1963) to demonstrate that anticipated inflation has a significant economic impact. He contends that since as inflation rises and the money rate of interest rises at a slower rate, the real rate of interest lowers increases. His case is founded on the notions that real investments are based on savings interest rates, real saves are based on real balances, and real money balances are reduced by inflation. As a result, wealth declines, encouraging additional saving. He claims that a number of causes, not only the community's incapacity to forecast it, are responsible for both the positives and drawbacks of inflation. Changes in inflation expectations have a considerable impact on economic activity. When inflation is expected, the money rate of interest rises by a less amount, spurring investment and hastening economic expansion (See also Girma, 2012).

According to Tobin (1965), inflation helps the economy thrive by acting as a store of value in the economy. Money serves only as a kind of financial capital asset, just like physical capital. Inflation has a negative influence on the link among money and capital

by raising the capital intensity and fostering economic development, according to the Tobin effect, which holds that those who keep money are more likely to acquire capital than those who retain it. According to Tobin's paradigm, greater inflation rates result in higher production levels. When switching transition between two constant-capital-stock systems, there is only a brief impact on output growth. In a steady state, production and consumption therefore increase. He also contends that the upward price movement of certain special pricing may more effectively adjust comparable prices during economic expansion due to the downward rigidity of prices.

Drazen (1981) examines how inflation affects the capital-labor ratio and the demand for capital using a finite-horizon utility-maximization model. The final result shows that if one bases saving and asset selection decisions on utility maximization, then one does not immediately get super neutrality, and that this distinction requires a rather short time horizon. It is also shown that it is possible to establish, in fairly general conditions, that higher inflation rates would lead to a higher total capital-labor ratio, corroborating the conclusions of Mundell and Tobin.

According to the World Economic Outlook Report (2011) published by the IMF, Nigeria's GDP tended to be low, and the country's inflation rates were rather high, with the exception of a few years during the 1980s. For instance, in 1998, the GDP growth rate was rather strong despite the high levels of inflation that year. SAP's primary focus was on increasing domestic output; therefore this may be a result of increased productivity at home.

1986 had inflation at 6.25 percent and GDP growth at 8.754 percent; 1987 saw inflation at 11.765 percent and GDP growth at -10.752 percent in Nigeria. Inflation skyrocketed to 34.211 and 49.2 percent in 1988 and 1989, whereas GDP rose at 7.543 and 6.467 percent, respectively. Inflation remained stable at 7.895 percent in 1990, the highest it has been since SAP was introduced in 1986.

Between 1993 and 1995, the annual inflation rate increased by more than 50 percent, after having risen by double digits for several years. The abysmal pace of GDP growth in Nigeria at this time reflects this. GDP grew by -0.618 %, 0.434 %, 2.09 %, 0.91 %, and 0.307 % from 1991 to 1995, while inflation rose from 12.195 % to 44.565 %, 57.416 % to 1994, and 72.81 % to 1995.

The fast decline in inflation to 29% in 1996 was not good for long-term investments. After dropping to 10.673 in 1997, 7.862 in 1998, and 6.618 in 1999, it leveled out at 6.938 in 2000 and remained quite stable. Growth in Gross Domestic Product (GDP) for 1996 was 4.94%, 1997 was 2.82%, 1998 was 2.716, 1999 was 0.474, and 2000 saw a modest uptick to 5.318.

Even though Nigeria's GDP grew at a very slow rate between 2001 and 2010, the country's oil export profits might explain the discrepancy between the two figures. In these years, GDP growth was 8.164%, 21.3172%, 10.335%, 10.585%, 5.393%, 6.211%, 6.972%, 5.996%, 6.96%, and 8.724%. Inflation rates ranged from 18.869 in 2001 to 12.883 in 2002 to 14.037 in 2003 to 15.013 in 2004 to 17.856 in 2005 to 8.218 in 2006 to 5.413 in 2007 to 11.581 in 2008 to 12.543 in 2009 to 13.72 in 2010.

Even while annual GDP growth has been quite solid, the poverty rate and the unemployment rate have both been on the increase. Investment levels are not proportional to growth rates because inflation introduces uncertainty. This shows that low investment and high inflation in Nigeria are counterproductive to long-term economic progress.

During the research, it was discovered that significant associations between FDI and inflation, government spending, and trade openness Asia, Europe, and Latin America all saw increases in foreign direct investment, but Africa had a decrease in trade openness, government spending, and overall consumption. According to the findings of the Dumitrescu-Harlin panel causality test, FDI, trade openness, and foreign investment in Asia and Europe are all indirectly connected to one another. The conclusions of this study are consistent with the findings of previous research. According to the findings of this inquiry, it seems that low- and middle-income nations have greater factor costs than high-income countries, which causes them to draw more FDI. These empirical findings may provide policymakers with fresh perspectives by emphasizing, among other things, a variety of recommendations for improving the beauty of the regions to FDI.

Theories of inflation

Keynesian theory of inflation

According to proponents of the theories of John Maynard Keynes (1883-1946), higher levels of aggregate demand lead to price increases. The demand that exists among consumers for various goods and services is the primary driver of demand-pull inflation. is greater than their supply and availability in the economy. Aggregate demand includes fiscal outlays, capital expenditures, and final consumption. According to Totonchi (2011), demand pressure and inflation may be reduced by implementing measures that reduce all parts of total demand. Reduce government expenditure, increase tax revenue, and better budget existing funds.

In Nigeria, where the economy can barely produce enough output to meet demand and is highly dependent on foreign investment, producers may become more engaged in rent-seeking economic activities rather than the real economic sectors that can address the issues of low productivity and unemployment, leading to increased inflationary pressures.

New neoclassical synthesis of inflation

According to Totonchi (2011), the new neoclassical synthesis saw demand and monetary forces as being important drivers of economic cycles. He continued by saying that although the synthesis sees expectations as being crucial to the inflation process, expectations may be controlled by monetary policy rules. The price level is an endogenous variable in the new IS-LM-PC (PC = Phillips curve) version of the new neoclassical synthesis, and the model enables Keynesian and real business cycle processes to work via relatively separate paths. (Note: PC = Phillips curve) (Totonchi, 2011).

2.5.3 Exchange Rate and sustainable development nexus

The endogenous nature of the traditional theory of the exchange rate predicts that its equilibrium level will be the same as that which maintains equilibrium in the balance of payments (Calvo, et.al 1996). The value of a country's currency is frequently used as a proxy for gauging the extent of that nation's economic progress through time. There

are a number of factors that contribute to the difference between the equilibrium exchange rate and the Purchasing Power Parity (PPP) rate in less developed nations (Froot and Stein, 1991).

Both the Balassa-Samuelson effect and the Bhagwati-Kravis-Lipsey effect are frequently mentioned. The Balassa-Samuelson effect states that the productivity gap between developed and developing countries in non-tradable goods is smaller than in tradable goods, but that wages are the same in both sectors. The Bhagwati-Kravis-Lipsey effect states that since non-tradable goods are primarily services (Polterrovich and Popov, 2006).

The Baassa-Samuelson effect states that the exchange rate (EXR) can rise without eroding business profits if productivity increases at a faster rate in sectors producing tradable output (primarily goods) than in sectors producing non-tradable output (primarily services), and if wages are equalized across sectors. Additionally, the Baassa-Samuelson effect states that the exchange rate (EXR) can rise without eroding business profits if as a direct consequence of this, real wage growth will continue to trail behind the expansion of productivity across the economy. In their research, Grafe and Wyplosz looked at the methods that might be used to estimate actual exchange rates (EXR) in developing nations (1997).

Because an increase in the money supply leads to inflation, many people believe that a strategy that involves maintaining a low exchange rate should be avoided. In both theory and reality, the undervaluation of currencies in Latin American countries throughout the 1980s led to inflation, as stated by Calvo, Reinhart, and Vegh (1995). On the other hand, it would appear that the impact is different depending on the method that is employed to maintain a low exchange rate. as something that does not belong in this planet.

Calvo and Reinhart (2000) assert that a fixed exchange rate regime is desirable for emerging countries due to the fact that currency volatility is far more detrimental to these nations than it is beneficial to industrialized nations. In point of fact, the statistics that link fluctuations in exchange rates to economic growth are inconsistent with one another. Ghosh and Wolf (1997) looked at a sample of 136 nations' economies from 1960 to 1989 and found that there was no correlation between changes in reported exchange rates and overall economic growth. According to Bailliu, et.al (2003), there is

a correlation between the level of economic development and the degree of exchange rate flexibility. The fact that the connection is favorable rather than unfavorable increases the likelihood that the result accurately reflects improvement.

2.5.4 Trade and sustainable development nexus

Using exports as a stand-in for trade and rising per capita income or gross national product growth as indices of development, several academics have investigated the hypothesis of a robust positive relationship between commerce and development over the years.

A handful of the research, which compared exports and growth, were multivariate, while the majority was bivariate. While some research employed time series data to explore the link for a few chosen nations, many studies took a cross-country strategy. The majority of the documented empirical findings have confirmed the idea that exports do, in fact, promote growth and development.

Important scholars who have conducted examinations on a global scale include Balassa, et.al (1978), using data from 11 Latin American nations, concluded that export earnings had a greater effect on production growth than other sources of foreign exchange gains such as public external debt and FDI. Michaely (1977) utilized a correlation analysis to look at the data from 41 countries, whereas Voivodas (1973) focused on the data from 22 LDCs. Balassa (1978) conducted research on this topic by utilizing the rank correlation method and gathering data from eleven different nations throughout the period of time 1960–1973.

Omoke and Ugwuanyi (2010) conducted research in Nigeria to study the links between export, local demand, and economic growth. They used Granger causality and integration tests to accomplish their investigation. The results of the Trace and Maximum Eigen Value tests indicated that there was no significant relationship between the variables; however, the results of the Pair-wise Granger Causality test indicated that growth in both countries' economies stimulates consumer demand both domestically and internationally.

The most recent time series study of trade and economic growth serves as the foundation for our investigation. Increases in real GDP are used as a proxy for economic growth,

whereas exports, foreign direct investment (FDI), and the nominal exchange rate are used as proxies for international trade. We choose to make use of the innovative, powerful, and adaptable method known as vector auto regressions so that we may effectively investigate the interactions that exist between these non-stationary time-series variables.

2.6 Expanding FDI across Africa

To boost its standing, Africa is enacting the necessary laws and initiatives to attract FDI to the continent. Cross-border investment, according to Görg and Greenaway (2004), is still likely one of the most obvious forces behind globalization. According to UNCTAD (2002), the majority of African nations have moved beyond simply allowing FDI into their economies to the more recent development of establishing government organizations with only with the intention of promoting their nations to the rest of the world as locations offering profitable investment opportunities. Government agencies such as the Ghana Investment Promotion Centre (GIPC) in Ghana, the Nigerian Investment Promotion Commission (NIPC) in Nigeria, the Liberia National Investment Commission (LNIC) in Liberia, the Kenya Investment Authority (KIA) in Kenya, and the Ugandan Investment Authority in Uganda are actively seeking domestic and international investors.

Not only have African states institutionalized these investment groups, but they have also institutionalized a wide range of benefits for investors from the nearby area and further afield. These investors come from all over the world. While financial incentives, such as tax holidays, tax refunds, subsidies, port fee exemptions, and so on, make up the majority of these measures, the majority of these nations also use rules-based incentives in addition to financial incentives. For example, some of these nations have tax holidays, while others have tax refunds. The majority of financial incentives, including as guarantees, loans, and grants, are distributed to businesses that possess the specific technology required to carry out government-critical initiatives. These organizations receive the most financial support. Items such as tradable licenses, pollution control subsidies, environmental permits, and the maintenance of employee rights are examples of regulatory-based incentives. According to Jauch and Endresen

(2001), there are several points of view on the significance of these investment incentives, despite the fact that they should have the most significant impact in terms of luring FDI to the nations that host these investments.

2.7 What Drives FDI and Sustainable Development?

FDI and economic improvement has been discussed before, and it is still being debated now. The bulk of research either looks at how FDI affects domestic economies or what variables drive FDI. The size of the domestic market, economic development, technical capacity, infrastructure, governmental policies, institutions, and other variables are among the key drivers of FDI that are covered in the literature. FDI contributes significantly to economic growth and development, increases a nation's technical level, and job creation. FDI is effective in bringing developing nations into the global economy and increasing the amount of cash available for investment. FDI, in short, acts in two ways to support development in developing nations: I by increasing host country's stock of capital; and (ii) boosting economic growth, employment opportunities, and the technological advancement of the country that is hosting the event. There have been several models developed to investigate the consequences and the factors that generate FDI. Gastanga et al. (1998) investigate not only the impacts of different policies on FDI flows from the perspective of the eclectic theory of international investment, but also the advantages of foreign   ownership, the location of the host country, and internationalization. Wheeler and Mody (1992) and Hines both make reference to the effects of institutional forces (1995) including the risk and corruption in the host nation when calculating FDI. Asiedu (2002, 2006) investigates how FDI flow is impacted by natural resources, market size, and the investment strategy of the host nation, corruption, and political unrest. Asiedu (2006) looks at the factors that influence FDI in Africa. She contends that although low inflation and an effective legal system encourage FDI, political instability and corruption have the opposite impact.

Obadan (1982) provides evidence in support of the market size hypothesis by utilizing yearly data from 1962 to 1974 and the least squares technique. He also demonstrates that protectionist measures are still relevant in today's economy (tariff

barriers). According to the findings of the analysis, element such as the size of the market, the pace of growth, and the tariff policy should all be considered whenever there is discussion over the possibility of bringing foreign investment into the country. According to the findings of Anyanwu's (1998) investigation into the economic factors that have an effect on foreign direct investment in Nigeria, the magnitude of the domestic market is a significant factor to take into consideration. In spite of the fact that the study found that the removal of the indigenization policy in 1995 led to a paramount increase in the amount of FDI, it also found that additional effort is required to strengthen the economic growth of the country in order to attract an even greater amount of FDI. Iyoha (2001) conducted research on the topic of international private investment and evaluated the consequences of a wide range of factors, including external debt, economic size, macroeconomic instability, and uncertainty. He provides evidence that, despite the size of Nigeria's market, direct investment from businesses located in other countries is discouraged due to the country's high rate of inflation. The findings of this study provide credibility to the contention that the current macroeconomic policy is ineffectual. Investment from other countries is discouraged. Anyanwu (1998) and Iyoha (1998) conducted research on the factors that influence FDI in Nigeria (2001). Two significant flaws in this research are the use of a common econometric methodology, as well as the failure to take into account the flow of FDI with regard to natural resources.

2.8 Literature Deficit(s) and Obviously Present

Research on the impact that FDI has on Nigeria is becoming an increasingly popular area of inquiry. Extensive study has been carried out on the factors that how FDI is encouraged and what effects it has on the economy of Nigeria and the variables that drive FDI. The findings of this investigation make it quite evident that published material, became abundantly evident that earlier research had not sufficiently investigated a variety of topics pertaining to FDI.

However, there is a need for more study on the consequences of the risk factor posed by the nation. It was necessary to conduct this study, which will examine the effects of the country's risk component and use a different method of statistical analysis because the

majority of previous studies used ordinary least square regression, which is a weak methodology for the study of FDI because it misses the interdependency of factors on a national and global scale The reason for this is clear now necessary to conduct this study, which will examine the effects of the country's risk component and use a different method of statistical analysis.

2.9 Conceptual Frameworks

Productivity and efficiency are both boosted in the nation that receives FDI as a result of the accompanying growth in investment as well as the technical development that this brings about. Both domestic consumption and exports have grown as a direct result of advances in productivity and efficiency, which have led to a growth in the output of production. Earnings in foreign currency, which might be generated through the sale of goods and services, contribute to the growth of the wealth of the nation that is hosting the business.

Conceptual Model

INDEPENDENT VARIABLES

DEPENDENT VARIABLE

FDI

Trade

Inflation

Exchange Rate

ECONOMIC GROWTH
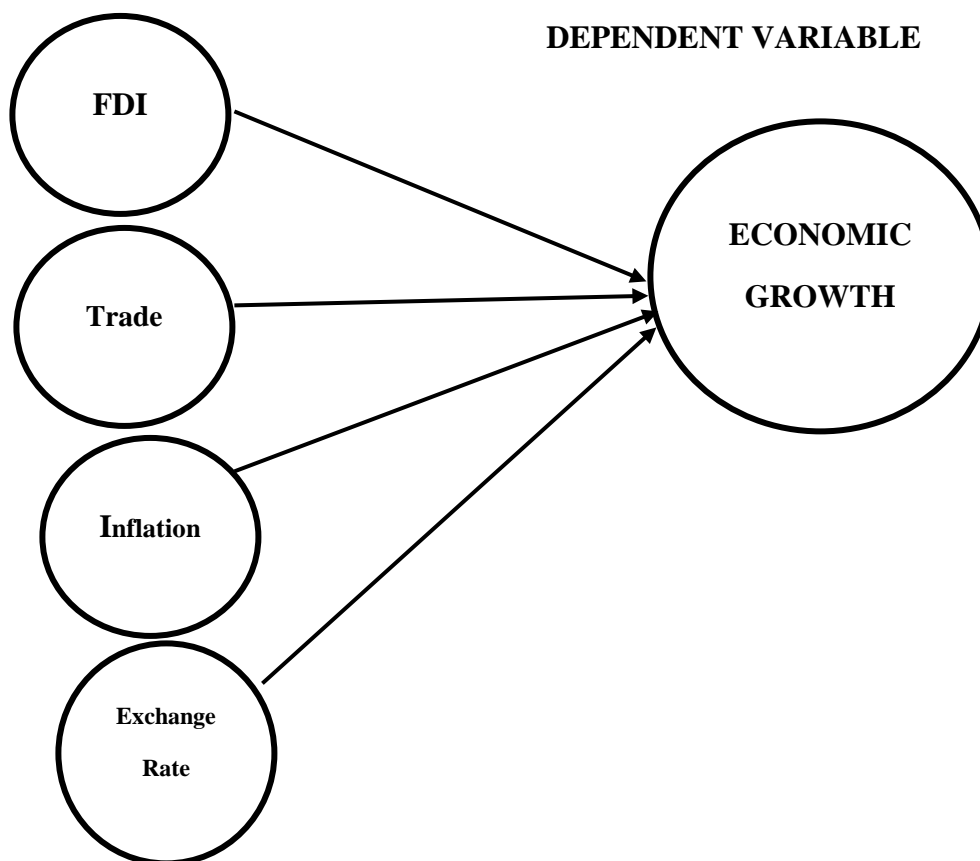
CHAPTER III

Methodology

3.1 Introduction

This chapter covers the process of data collection for this study, the strategy or model for regression analysis, as well as the tests that are conducted to comprehensively answer the research questions. All of these topics are discussed in this chapter. In the final part of this chapter, you will become familiar with the factors that were considered in the course of this research.

3.2 Data

The process of gathering and measuring information on specific variables within the context of a preexisting system is referred to as "data collection." Using this method, you will be able to evaluate the results as well as obtain answers to significant issues. According to Manh-Tung, one of the most important aspects of the research process is the collecting of data all areas of academic inquiry, including the natural and social sciences, the arts and humanities, and business (2018). The emphasis on ensuring precise and honest gathering is maintained despite the fact that the tactics used differ depending on the field. The purpose of any effort to collect data is to amass trustworthy and credible responses to the questions that are addressed by utilizing high-quality information that has been gathered and is capable of being processed. When conducting a census, there are four processes that are engaged in the gathering and validation of data, and there are seven stages involved in the sampling process. The collecting of sufficient data is required in order to keep the study credibility intact. In order to evaluate the effect that FDI would have on Nigeria's long-term sustainable development, data were gathered for this study between the years 1990 and 2020 using the data portal provided by the World Bank. A method of data collection that is organized is required in order to guarantee that the information that is acquired is accurate as well as specified. At the World Bank, databases are essential tools that help support crucial management decisions and provide crucial statistical data for bank operations. Using standards and norms that are recognized all across the world provides a source of information that is consistent and credible. Good data is needed in order to develovnp baselines, determine

effective public and private activities, define objectives and targets, monitor progress, and evaluate outcomes. They are also an essential instrument for effective governance since they enable citizens to scrutinize the activities of their government and have an active role in the planning and production of new things.

3.3 Variables

GDP growth (annual %)- GDP annual percentage growth rate expressed in constant neighborhood currency based on current market prices The calculations are done in US dollars using constant prices from 2015. The gross domestic product (GDP) is calculated by adding up all of the gross value contributions made by resident producers in the economy, factoring in any applicable product taxes, and deducting any subsidies that are not factored into the product value. It takes into consideration the deterioration of natural resources as well as the deterioration of generated assets over time.

The entire value added by all of the country's producers is what's known as the country's gross domestic product, or GDP. Before taking into consideration the value of the fixed capital that is used in production, value added is calculated by subtracting the value of intermediate goods and services used in production from the value of the gross output of the producers. According to the United Nations System of National Accounts, value-added should be determined using either basic prices (without net taxes on items) or producer prices. Basic prices should be used for calculating value-added (including net taxes on products paid by producers but excluding sales or value-added taxes). Both of these values do not take into account the cost of transportation because manufacturers add on a separate fee for that service. When calculating total GDP, purchaser prices are taken into account. When determining value added by employing producer pricing, it is common practice to estimate the value addition of an industry using the basic price. The least-squares approach is used to data on constant prices in the nation's currency in order to calculate the growth rates of GDP and the components that make up GDP. When calculating growth rates for regions and income groups, constant prices measured in US dollars are used as the basis for the series. Applying the conversion rate from the common reference year allows one to convert a sequence of values denominated in a local currency into constant dollars.

The rate of growth of an economy may be determined by looking at the amount of its production or the actual wages of its citizens. GDP, real GDP, and national income from real GDP are the three credible indicators for measuring growth that are included in the 2008 System of National Accounts (2008 SNA) that is published by the United Nations. The Gross Domestic Product (GDP) is the entire value that is created in the economy at constant prices by families, governments, and industries. The Gross Domestic Product (GDP) is a measurement of total domestic output, regardless of where the finances for that output come from—within the country or outside of it.

The growth in the value added by the industry is a measurement that determines how much each industry contributed to the expansion of the economy's production. Calculating value added at constant prices can, in theory, be done by computing the quantity of goods and services produced during a specific time period, then pricing those goods and services using a predetermined standard set of prices for the base year and finally deducting the cost of intermediate inputs at constant prices from the total. This approach of twofold deflation requires an in-depth study of the pricing structure of the various inputs and outputs of the business. However, in many different types of businesses, the value added is calculated by extrapolating from the base year utilizing single volume indexes of outputs or, less frequently, inputs. This method is utilized in the calculation of value added. In the context of prices that remain constant, value added is generally thought of as being derived from labor inputs such as real pay or the number of employees, in particular in the service sectors, which account for the majority of governmental employment. It is difficult to measure the growth of services since there are not enough output indicators that have been clearly specified. Furthermore, technological innovation may result in improvements in production processes and product quality. These improvements, if they are not correctly accounted for, can lead to misaligned assessments of value added, which in turn can lead to growth that is unsustainable. When inputs are used to estimate output, as is the case with nonmarket services, unmeasured technical advancement results in a volume of output that is underestimated. On the other side, increases in quality that are not assessed contribute to an underestimation of production as well as value added. As a direct consequence of this, growth as well as increases in productivity may be underestimated, while inflation

may be exaggerated. In developing nations, where the bulk of economic activity is still unrecorded, informal economic activities provide a particularly challenging measuring challenge. This is especially true in developing countries. To get a comprehensive view of the economy, it is required to estimate home production for internal consumption, sales in informal marketplaces, barter exchanges, and activities that are either illegal or purposefully unreported. The abilities and methods used by statisticians in the creation of such estimations are what determine the reliability and accuracy of the results. When national accounts are rebased, it is possible that the anticipated growth rate of an economy may alter, and there may also be gaps in the series, which poses a danger to the data's consistency over time. When countries rebase their national accounts to more accurately represent current patterns of output generation or use, one of the things that get changed is the weight that is given to each individual component. The new base year ought to be reflective of the regular functioning of the economy; that is, it ought to be a year that did not experience any large shocks or distortions. There are a number of developing countries that have not updated their national accounting bases in quite some time. It is possible to get misleading results by using an older base year since implicit price and volume weights become less relevant and beneficial with time. The World Bank adjusts the GDP and the value contributed by an industry to a standard reference year in order to provide a comparable series of data with constant pricing for the purpose of computing aggregates.

Foreign direct investment inflow (% of GDP) - Foreign direct investment (FDI) is the process by which an investor from one country acquires a significant controlling interest (10% or more of the voting shares) in a firm operating in a different economy. This section of the balance of payments includes the flow of money in the form of equity capital, earnings reinvestment, other long-term capital, and short-term capital. For each reporting nation, this dataset categorizes the total net inflows from foreign investors by GDP. The net inflow is calculated by adding the proceeds from new investments to those from the sale of existing ones.

Fund for International Settlements balance of payments data was used to generate the estimated equity flows (IMF). Additional data on FDI comes from World Bank staff projections using data from UNCTAD and official country sources.

According In accordance with the IMF's Balance of Payments Manual, 6th Edition (2009), Foreign Direct Investment comprises of the following: equity investments (including equity-related investments that give rise to control or influence), investments in firms affected or controlled indirectly, investments in other enterprises, debt (save for chosen debt), and debt securities all fall under the category of "investments." investment reversal. For establishing whether or not a foreign ownership structure constitutes a direct investment connection based on control and influence, the Framework for Direct Investment Relationships specifies criteria. Unlike other types of international investment, FDI is done with the intention of acquiring a controlling stake in, or effective managerial control over, a company in a foreign country. Warehouses, factories, and other permanent or long-term establishments in a foreign nation are typical examples of the types of investments made by corporations. Investing abroad can take the form of a "greenfield" investment, in which the investor builds brand-new production facilities in a foreign country, a "joint venture," in which the investor forms a partnership agreement with a company in a foreign country, or a "merger and acquisition," in which the investor buys an already-established business abroad. The International Monetary Fund defines FDI as investments that represent at least 10% of voting stock. The reality is that other countries put up a far bigger wall. Both the definition of long-term loans and the practice of recording revenues that were reinvestment vary widely from nation to country. "balance of payments" is shortened to "BoP" for convenience.

A country's foreign investment may be difficult to fully grasp from FDI data alone. Some developing nations rely heavily on money that is created within the country as an investment vehicle, but this kind of currency is not accounted for in the aforementioned balance of payments data on FDI. FDI figures do not include non-equity cross-border transactions such intra-unit movement of commodities and services. Due to discrepancies in data collection, classification of economies, and data manipulation and disaggregation techniques, the World Bank's reported amount of worldwide private financial flows is often different from that reported by other sources. Debt financing, in particular, might involve adjustments to account for the classification of certain

transaction installments and offshore issuances. For each country where information is compiled, statistics on equity flows are shown.

Inflation GDP deflator (annual %) - Taking a look at the yearly growth rate of the GDP implicit deflator is a good way to get a sense of the pace of inflation that the economy is experiencing. We are able to calculate the GDP implicit deflator by making the comparison between GDP measured in constant local currency and GDP measured in current local currency.

Real effective exchange rate index (2010 = 100) - By dividing a price deflator or cost index by the nominal effective exchange rate, we may see how much one currency is worth in relation to a weighted average of various foreign currencies.

Economists examine the relative changes in national pricing or cost indices in the host country, selected nations, and the Eurozone to determine the real effective exchange rate. A weighted geometric average of exchange rates for a basket of countries and the Eurozone is used to determine the nominal effective exchange rate index (with 2010 as the base year and 100 as the desired rate of inflation). Most countries in the medium and above income brackets have to import manufactured goods from the industrialized countries. The data is derived using the index of nominal effective exchange rates and a relative normalized indicator of unit labor costs in manufacturing. A nominal effective exchange rate index for a group of other countries can be calculated using bilateral trade in manufactured goods and primary products with partner or competitor nations. A nominal index that takes inflation and wage growth into account is the real effective exchange rate index for these nations. When the actual effective exchange rate index goes up, the value of the home currency goes up with it.

In a market economy, the decisions made by consumers, corporations, and governments about how to distribute their resources are affected by the real exchange rate, real wages, real interest rates, and other prices in the economy. The proportional price tag also reflects the actions taken by these groups. Since this is the case, relative pricing may tell us a lot about the social structure of an economy and the way its members interact with one another and the world at large.

Changes in effective exchange rates need to be carefully examined due to conceptual and empirical constraints.

Net trade: The prices at which the goods of one nation are traded for the goods of another country are referred to as the terms of commerce (Jhingan20l2). When analyzing the relative buying power of a nation's exports and imports, one method that may be utilized is to compare the prices at which the same product is sold in domestic and international markets. When the ratio of a country's export prices to its import prices goes up, this indicates that the country's trading situation has improved. The ability of a nation to acquire a greater quantity of goods while sustaining its current level of exports is one of the many reasons why commerce is beneficial to a nation. Some individuals may come to the conclusion that the nation trade circumstances have gotten worse when there is an increase in the price of imports in comparison to the price of exports. The benefits of commerce are diminished when there is a probability that there will be less imports in return for the same quantity of exports (Jhingan 2012).

Trade consists of an ongoing succession of goods being swapped for one another via market trades (Abebefe 1995). It is claimed that a transaction takes place on an international level if its scope goes beyond the jurisdiction of a sovereign governing body. In light of this, Samuelson and Nordhaus (2002) describe international commerce as the activity of nations exchanging goods, services, and/or capital with one another. This definition can be attributed to Samuelson and Nordhaus (2002). They say that the three differences between domestic and international commerce are expanded commercial prospects, sovereign nations, and exchange rates, and they add that these contrasts have substantial ramifications in both the practical and the economic realms. Behind the scenes, there are two forces at work that make it possible for nations to engage in international trade: first, trade encourages specialization, and second, higher production is driven by specialization.

The trading of goods and services that takes place outside of national boundaries is the essence of what we mean when we talk about international commerce. In order for governments to remain informed on the state of international business, it is necessary for them to keep records of the transactions that take place between nations. These kinds of transactions are recorded in the accounts that make up the cash flow statement balance. Because of this, international trade and the nation's overall financial standing are two aspects of the relationship between nations that cannot be overlooked.

No country can be considered self-sufficient relative to the goods and services necessary to meet the day-to-day needs for raw materials, semi-finished goods, and finished goods since these wants are universal. As a consequence, it is unavoidable for countries to take part in international trade, as advocated for by many trade theories. As a direct consequence of this, commerce risen to prominence and now rules the overall structure economy worldwide. The nature of international commerce has been progressively evolving for some time now. These transitions come with a plethora of opportunities as well as challenges. Any nation that participates in international trade will enjoy a certain level of success if it is able to identify and take advantage of opportunities as they arise, in addition to formulating plans and regulations to eliminate potential challenges and/or turn them into profitable business ventures. Nigeria became an independent nation in 1960, and since then it has implemented a variety of trade policy regimes in an effort to strengthen its existing business relationships. Her trade policy has seen major shifts, transitioning from a high degree of protectionism during the first decade of independence to a more liberal one currently. These shifts have occurred throughout the course of the last decade (Adenikinju 2005).

The purpose of Nigeria's trade policy is to encourage the global trade of produced goods and to fortify the nation economic relations. In addition to increasing income from exports and reducing the nation reliance on the oil industry, the goal of this initiative is to discourage dumping, encourage import substitution, halt unfavorable changes in the balance of payments, save foreign currency, and produce income for the government (Bankole & Bankole, 2004).

After it attained its Upon its independence, Nigeria opted to develop its industrial sector based on the concept of import substitution. During the first 10 years after independence, local manufacturing companies were given protection from competition by having quantitative limits and substantial import levies put into place. As a direct consequence of the post-war reconstruction, the only items that were outlawed between the years 1970 and 1976 were those that were considered to be non-essential consumption products. The tariffs placed on raw materials were dropped, and prohibitions on bulk purchases of machinery, agricultural equipment, and replacement parts were eliminated. 1973 saw significant expansion in the oil industry, these liabilities

were ultimately discharged. A shift in government policy toward encouraging exports and an initiative to make greater use of domestic raw materials led to a reduction in tariffs on raw materials and intermediate capital products in 1981.

3.4 Model Specification

An autoregressive distributed lag (ARDL) model is a model that is based on ordinary least squares (OLS), and it may be applied for both non-stationary and mixed order of integration time series. ARDL stands for "autoregressive distributed lag." This model, which operates within the context of a general-to-specific modeling framework, makes use of the proper number of delays to illustrate how data is generated.

A straightforward linear transformation may be used to convert ARDL into a dynamic error correction model (ECM), which can then be used. In a similar manner, the ECM blends short-run dynamics with long-run equilibrium without compromising the integrity of the long-run information. In addition to this, problems such as misleading associations brought about by non-stationary time series data are removed entirely.

I employ annual time series data, starting in 1990, and going through 2020 to complete this study. Secondary data on growth, FDI, currency rates, inflation, and net trade are among the "global development indicators" issued by the World Bank. The data is analyzed using a multivariate regression model. This model was based on the work of Barua (2013), who studied the impact of FDI inflows on India's economic development and exports. In order to measure the impact of GDP growth on FDI and exports, Barua (2013) developed a model based on multiple regression analysis. Independent factors that will be analyzed in this research are exchange rate, total trade, inflation, and FDI inflows as a percentage of GDP.. The following is a list of the model's specifications:

$$GDP_t = \beta_o + \beta_1 FDI_t + \beta_2 INF_t + \beta_3 REER_t + \beta_4 NT_t + \varepsilon_t$$

(1)

Where:

GDP stands for gross domestic product/ Economic growth

FDI is the foreign direct investment net inflow % of GDP

REER represent the real effective exchange rate

NT stands net trade % of GDP

β is constant of the parameter

T is the time interval

3.5 Descriptive Statistics

Descriptive Statistics are used to describe, show, and describe in brief what essential properties of a dataset that were observed in a particular research endeavor. This kind of summary also discusses the data sample and its measurements. It makes it easier for analysts to comprehend the data and gives you a clear picture of what your current data tells about the situation.

On the other hand, statistics that are utilized in the process of describing a data sample currently available and do not include hypotheses, judgments, probabilities, or conclusions. Inferential statistics are essential for achieving this goal.

One of the most popular and valuable applications of statistics is inferential analysis, and descriptive statistics are right up there with it. The use of descriptive statistics allows one to present an overview of the sample that is being studied without depending on any assumptions derived from probability theory. Even when inferential statistics are the primary focus of a piece of study, it is usual practice to use descriptive statistics to provide a comprehensive overview of the subject matter being investigated. A population may be characterized with the use of descriptive statistics, which make use of tools such as frequency distribution tables, percentages, and other measures of central tendency such as the mean to gather information about the population. The use of statistical tests to compare means and define the findings in terms of statistical significance is referred to as inferential statistics. One example of such a test is the Mann-Whitney U-test. This kind of statistical analysis includes things like the Chi-square test, for instance. Data can be summed up with descriptive statistics in a number of different ways, including the use of straightforward quantitative measurements such as percentages or means, as well as the construction of graphic summaries such as histograms and box plots. Both of these methods are examples of how data can be summarized.

3.6 ADF unit root test

An extended Dickey-Fuller test is utilized in the fields of statistics and econometrics for the purpose of determining whether or not a time series sample contains a unit root (ADF). The null hypothesis might be either trend-stationarity or stationarity, depending on the particular test that was performed. It is an improved version of the Dickey-Fuller test that may be used to a larger variety of time series models that have more complex structures.

Those who are aware with the primary concept that underlies the Dickey-Fuller test should not be surprised to learn that the conclusion that an enhanced Dickey-Fuller test (ADF) is just that—an expanded version of the original exam—and that this should not come as a surprise. In 1984, these same statisticians took their simple autoregressive unit root test and refined it further into what is now known as the Dickey-Fuller test. They did this by integrating models of different complexity and uncertain ordering (the "augmented Dickey-Fuller test").

The objective of the enhanced Dickey-Fuller test is, as was the case with the original Dickey-Fuller test, to determine whether or not a time series in question has a unit root. The usage of this test is beneficial to both the discipline of econometrics, which is the study of how mathematics, statistics, and computer science may be applied to economic data, and statistical research.

Due to the fact that the ADF is used for a more wide and complicated collection of time series models, it is distinct from the MAT in this essential regard. When doing the ADF test, a modified Dickey-Fuller statistic with a negative value is utilized. A more pronounced objection to the idea of a unit root is indicated by a value that is farther away from zero. Obviously, this is nothing more than a guess in the dark. If I may put it another way, if the ADF test statistic is positive, the null hypothesis of a unit root does not have to be rejected just because it is not supported by the data.

3.7 ARDL bound test

In 2001, Pesaran and Shin (1999) and Pesaran et al (2000). There are three benefits that it offers in comparison to more conventional approaches of cointegration.

One advantage is that the ARDL can be used regardless of whether the underlying variables are integrated in order 1, order 0, or fractionally. This is because the ARDL can handle all three types of integration. The performance of the ARDL test is also significantly improved when working with limited or tiny data sets. The ARDL approach presents us with objective assessments of the long-run model, which is the third and last advantage of using this technique (Harris and Sollis, 2003).

3.8 ARDL Model

"ARDL" is an abbreviation for "Autoregressive-Distributed Lag." This type of regression model has been used for decades, but it was only recently shown that it is a very important way to look for long-term correlations between economic time series.

The ARDL test is ideal for the purposes of our investigation since it is more reliable and produces reliable results even with a limited amount of data. It is standard practice to use autoregressive distributed lag (ARDL) models within the context of a single-equation framework when doing research on the dynamic interactions that occur in time series data. In the context of a single equation, autoregressive distributed lag (ARDL) models are typically applied when the goal is to investigate dynamic interactions by making use of time series data. It is acceptable for the current realization of the dependent variable to be contingent not only on the current but also on the historical realizations of the other explanatory variables (the autoregressive component) (the distributed lag part). There are three possible states for a variable: stationary, nonstationary, or both. Using the equilibrium correction (EC) version of the ARDL model, it is possible to test for cointegration, which refers to the presence of a long-run relationship between the variables of interest, and it is also possible to isolate the effects of cointegration on the long run. The area Stata command, which can be used to estimate an ARDL or EC model with the optimal amount of lags based on the Akaike or Schwarz/Bayesian information criteria, will be introduced during this session. This command can be used to calculate the optimal number of lags in order to produce the most accurate results. In this guide, we will walk you through the steps of conducting the bounds test for the presence of a long-run connection as described by Pesaran, Shin, and Smith (2001, Journal of Applied Econometrics), and we will also address some of

the most frequently asked questions that arise in the course of using this method. In addition, we will walk you through the steps of conducting the bounds test for the presence of a long-run connection as described by Pesaran, Shin, and Smith (This test, which is implemented as the stat test post-estimation command, includes newly calculated finite-sample critical values as well as estimated p-values. The prior tabulations in the literature have been superseded by these core values since they are applicable to a large variety of different model setups. All of these factors—including sample size, lag order, the number of explanatory variables, and whether or not the components of the deterministic model are open or closed are taken into account. In order to arrive at an estimate for the model, the area command uses the regress feature that is available in Stata. As a result, specification tests for linear (time series) regressions may be carried out with the help of the usual post-estimation commands, and real-time predictions can be produced with the help of the forecast command suite.

The most significant benefit of ARDL is that it does not require variables to be categorized as either I (0) or I (1). This is because unit root pre-testing is not required when using ARDL. According to Sezgin and Yildirim (2002) and Ouattara (2004), the limits test, which makes the assumption that the variables are co-integrated regardless of whether they are I (0) or I (1), results in inaccurate F-statistics when there are I (2) variables present. This is because the limits test assumes that the variables are co-integrated whether they are I (0) or I (1). (12). Therefore, the unit root test may still be utilized in the ARDL technique to verify that no variables are integrated at order 2, also known as I (2) or higher. This can be accomplished by ensuring that there is no correlation between the variables being tested. In order to determine the order in which the study subjects were included, a unit-root test called the Augmented Dickey-Fuller (ADF) was carried out.

So based on the equation (1) the ARDL model equation is developed as under:

$\Delta InGDP_t = \alpha_0 + \beta_1 InGDP_{t-1} + \beta_2 InFDI_{t-1} + \beta_3 InREER_{t-1} + \beta_4 InINF_{t-1} +$

$\beta_5 InNT_{t-1} + \sum_{i=0}^{q} \Delta\alpha_1 InGDP_{t-k} + \sum_{i=0}^{p} \Delta\alpha_2 InFDI_{t-k} + \sum_{i=0}^{p} \Delta\alpha_3 InREER_{t-k} +$

$\sum_{i=0}^{p} \Delta\alpha_4 InINF_{t-k} + \sum_{i=0}^{p} \Delta\alpha_5 InNT_{t-k} +$

ε_t (2)

3.9 Error Correction Model

The equation 2 has been modified as under in order to have the error correction model,

$$\Delta\, \text{GDP}_t = \alpha_0 + \sum_{i=0}^{q} \Delta\beta_1\, InGDP_{t-k} + \sum_{i=0}^{p} \Delta\beta_2\, InFDI_{t-k} + \sum_{i=0}^{p} \Delta\beta_3\, InREER_{t-k}$$

$$+ \sum_{i=0}^{p} \Delta\beta_4 InINF_{t-k} + \sum_{i=0}^{p} \Delta\beta_5 InNT_{t-k} + \lambda ECM_{t-1} + \varepsilon_t$$

(3)

Where:

GDP stands for gross domestic product/ Economic growth

FDI is the foreign direct investment net inflow % of GDP

REER represent the real effective exchange rate

NT stands net trade % of GDP

$\beta 1$ …..5 Is constant of the parameter

T is the time interval

Model stability

3.10 Residual diagnostic

A practical use of the serial correlation model developed by Breusch and Godfrey It is possible to detect whether or not the error statistics of a regression model exhibit autocorrelation by employing the LM test. The test statistic for a regression analysis is obtained by taking the model's residuals and multiplying them together. This strategy makes use of the residuals in a productive way. In the event that the null hypothesis is confirmed to be accurate, there will be no serial correlation of any rank up to p. When trying to fit regression-like models to observed data sets, statisticians often turn to the Breusch-Godfrey test in order to verify the validity of particular modeling assumptions they have to make. T. S. Breusch (1978) it makes a concerted effort to detect serial correlation, which has not been included into a suggested model structure and which, if present, could lead to false positives in other tests or poor estimations of

model parameters. It does this by making an effort to detect serial correlation, which has not been included into a suggested model structure.

One sort of regression model that the test may be used to is one in which the lag values of the dependent variables can be used as independent variables in the model representation for future observations. This is one example of the type of regression model. This form may be seen rather frequently in economic theoretical discourse.

ARDL models are frequently used when trying to simulate time-varying volatility in financial time series such as FDI. This is done in order to achieve the modeling goal. Heteroscedasticity Volatility tends to cluster when ARDL models are used since it is assumed that the variance of the current error term is proportional to the size of the error terms that were present in previous time periods. The Breusch-Pagan test is one that may determine whether or not a regression model exhibits heteroscedasticity. This phenomenon is known as heteroskedasticity, and it occurs when the standard deviations of a predicted variable fluctuate with regard to the values of independent variables or with respect to preceding time periods (or heteroscedasticity). The chance that a random variable is regularly distributed may be determined using tests for normality, as can the degree to which a particular data set can be relatively well-modeled by a normal distribution. In order to determine whether or not the sample data follow normal distribution, a normality test is carried out (within a certain range of error).

3.11 Granger Causality

Granger causality refers to a statistical model of cause and effect that is founded on the concept of prediction. According to the theory of Granger causality, if a signal X1 "Granger-causes" (or "G-causes") a signal X2, then previous values of X1 should provide information that aids in predicting X2 in addition to that which is provided by past values of X2 alone. This is because Granger causality states that if a signal X1 "Granger-causes" (or "G-causes") a signal

The notion of causality, as outlined by Wiener (1956) and Granger is an essential part of the research process for investigating the interrelationships of many time series (1969). Wiener-Granger causality research centers on how well one can anticipate future events primary focus; this is one reason why economists and decision-makers place such a high

importance on the theory. Granger causality is an approach that is often investigated in practice for bivariate systems. However, if more than two criteria are included, it is possible to arrive to different conclusions. When there are there is an increase in complexity for the non-causality requirements when there are more than two independent variables at play, as discussed by researchers such as Renault et.al (1998). Another way of saying this is that even if a variable is Granger-causal in a bivariate model, it is possible that it will not be included in a larger model that contains other variables. We'll be talking about causal relationships here that were determined in a roundabout way by including a third variable (often called an auxiliary variable) in the analysis (s). For example, the bivariate causal structure may vanish after a third variable is incorporated into the model if that variable drives both of the dependent variables in the bivariate process. Alternatively, a variable that is not causal for another in a bivariate model may turn out to be causal if the data set is expanded to include new components. This is because expanding the information set includes more variables. This second set of circumstances is what many in the field call a spurious causation. If these causal impacts are ignored, it's possible that erroneous economic evaluations and, as a consequence, bad policy decisions would ensue. Within the scope of this investigation, we provide statistical methods that may be used to assist in the identification of spurious and indirect causal effects.

However, in practice, only a limited amount of data is taken into consideration, and leaving out key components (auxiliary variables) could result in erroneous conclusions about causation or hinder the detection of probable indirect causality between the variables of interest. In practice, only a limited amount of data is taken into consideration. Hsiao (1982), who eloquently introduced the idea of indirect or spurious causation in a trivariate model Eichler (2007, 2012), was the first person to bring attention to the significance of the information set for Granger causality research. Hsiao (1982) outlines a straightforward framework for elucidating the causal interrelationships that are present in a multivariate time series model. The Wiener-Granger theory of causality, which was developed in the 1960s, serves as the foundation for this method. He is currently working on establishing a Granger causal ordering of the events in order to bridge the gap between the findings of the bivariate and multivariate analyses. This

will allow him to bridge the gap between the two sets of data. He extends Granger's concept of causality in order to take into consideration the fact that multivariate research may provide erroneous or indirect conclusions regarding cause and effect. This is done so that we may take into consideration the potential of a causal chain that is either fictitious or indirect. He provides a specific illustration to illustrate how the reduction in the amount of information available leads to the elimination of a specific form of spurious causality. This discovery, which is independent of the knowledge set that lies underneath it, necessitates improved prediction, which further supports the concept of (direct) causation. Hsiao (1982) examines indirect and spurious causation within the setting of VAR models and investigates how to validate these causal effects in the presence of known auxiliary variables. In addition, Hsiao (1982) examines how to distinguish between true and spurious causation. The first collection of Hsiao's writings was not published until the year 1982.

$$\Delta InGDP_t = \lambda_0 + \sum_{i=1}^{m} \lambda 1i \,\Delta In\, GDP_{t-i} + \sum_{i=1}^{n} \lambda 2i \Delta FDI_{t-i} + \sum_{t=1}^{p} \lambda 3i \Delta INF_{t-i}$$
$$+ \sum_{i=1}^{q} \lambda 4i \Delta InREER_{t-i} + \sum_{i=1}^{a} \lambda 2i \Delta NT_{t-i} + \mu_t$$

(4)

$$\Delta InFDI_t = \lambda_0 + \sum_{i=1}^{m} \lambda 1i \,\Delta In\, FDI_{t-i} + \sum_{i=1}^{n} \lambda 2i \Delta GDP_{t-i} + \sum_{t=1}^{p} \lambda 3i \Delta INF_{t-i}$$
$$+ \sum_{i=1}^{q} \lambda 4i \Delta InREER_{t-i} + \sum_{i=1}^{n} \lambda 2i \Delta NT_{t-i} + \varepsilon_t$$

(5)

Where GDPt is real gross domestic product, FDI is foreign direct investment, REER is the real effective exchange rate, NT is net trade and INF is inflation; ε_t and μ_t are white noise error processes, and m, n, p and q denote the number of lagged variables. The null hypothesis that FDIt does not Granger cause GDPt is rejected if the $\lambda 2i$ are jointly significant in Equation (5), also, if $\lambda 3i$ are jointly significant, the null hypothesis that

INF does not Granger cause GDP is rejected. Similarly, in Equation (6), the null hypothesis that GDPt does not Granger cause FDIt is rejected if the $\lambda 2i$ are jointly significant and the null hypothesis that INFt does not Granger cause FDIt is rejected if $\lambda 3i$ are jointly significant.

3.12 Stability tests

Nonlinear models seldom suffer from parameter instability (Saliminezhad et al., 2018). Therefore, the stability of the estimated model used must be evaluated in order to check the accuracy of the findings. For this type of volatility, like FDI, we employ the CUSUM of Squares Test (1975) developed by Brown and coworkers. Heteroskedasticity in ARDL models, volatility clusters because the variance of the current error term is considered to be proportional to the magnitude of the error terms in earlier periods. If a regression model has heteroscedasticity, the Breusch-Pagan test can tell you. There is evidence of heteroscedasticity (or heteroscedasticity) when the standard deviations of a predicted variable vary with respect to other independent variable values or with respect to earlier time periods. Tests for normality determine the likelihood that a random variable is regularly distributed or if a given data set is reasonably well-modeled by a normal distribution. A normality test is performed to check the distribution of the sample data (within a certain range of error). While parameter instability can occur in some linear models, it is extremely rare in nonlinear ones (Saliminezhad et al., 2018). Therefore, the stability of the estimated model used must be evaluated in order to check the accuracy of the findings. To do this, we employ Brown's and coworkers' CUSUM of Squares Test (1975). Whether or not you place faith in the post-estimation test depends on how stable the model remains during the procedure (Hansen, 2000). When doing a multiple linear regression analysis, cusum tests are performed to ensure that the coefficients are stable. Sums or squares of recursive residuals (standardized one-step-ahead prediction errors) generated at regular intervals from nested subsamples of data are used for inference. Even if we assume that the parameters remain constant over time, we might infer that the model's structure has evolved if we observe values that fall outside the sequence's predicted range.

CHAPTER IV

RESULTS AND INTERPRETATION

4.1 Introduction

Tests are discussed in this chapter to help us answer our research questions and decide whether or not our hypotheses hold water. The stationary test demonstrates that our variables are stable over time; the ARDL bound test demonstrates the extent to which our dependent and independent variables are related; and the short run and long run ARDL tests demonstrate the extent to which our independent and dependent variables are related over time. In addition, a select number analyses were flagged as diagnostic analyses. The serial correlation test, normality test, and heteroskedasticity test all check for the presence or absence of serial correlation, normality in the residuals, and homogeneity in the data, respectively. Finally, the stability of the perimeter was determined by conducting CUSUM and CUSUM of Square tests, both of which successfully using the EViews software. These tests reveal whether or not the perimeter is stable in the data set.

4.2 Descriptive Statistics

Table 4.1 Descriptive Statistics

	GDP	FDI	INF	NT	REER
Mean	4.341822	0.384979	17.27493	2.88E+09	108.0911
Median	4.631193	0.290823	10.22849	2.88E+09	100.0000
Maximum	15.32916	1.919487	75.40165	2.44E+10	272.999
Minimum	-2.035119	0.008309	0.686099	-3.22E+10	49.74471
Std. Dev.	4.081692	0.392998	16.01108	1.41E+10	50.16932
Skewness	0.413103	2.349708	1.937249	-0.837951	1.859103
Kurtosis	3.180687	8.914439	6.953201	3.852190	6.244940
Jarque-Bera	0.923882	73.70909	39.57606	4.565881	31.45814
Probability	0.630059	0.000000	0.000000	0.101984	0.000000
Sum	134.5965	11.93435	535.5230	1.20E+11	3350.825
Sum Sq. Dev.	499.8063	4.633415	7690.645	6.00E+21	75508.83

Observation	31	31	31	31	31

Source: This Study

The mean of the variables for GDP, FDI, INF, NT, and REER is shown in Table 4.1 as a descriptive statistic. The values are 4.341822, 0.384979, 17.27493, 2.88E+09, and 108.0911, respectively. This category's greatest value has a maximum GDP of 15.32916 and a maximum exchange rate of 272.999. In terms of the skewness's outcome, the data are mostly symmetrical if the skewness is 0.5% in either direction, positive or negative. The data are significantly skewed when the skewness is either -1 or -0.5, or 0.5 or 1, respectively. If the skewness value is more than one, the data are significantly skewed. In compared to a normal distribution, the data are either heavy-tailed or light-tailed depending on the degree of kurtosis. Data sets that have a high kurtosis are characterized, for want of a better phrase, by the presence of heavy tails or enormous outliers. Data sets that have a low kurtosis are characterized by not having any outliers and having thin tails. The worst conceivable outcome is a distribution that is completely even.

4.3 Unit Root Test

An augmented Dickey-Fuller test, often known as an ADF test, is a statistical and econometric process that examines a time series sample to determine whether or not it has a unit root. In spite of the fact that trend-stationarity and stationarity are prevalent options, the results of individual tests may provide different results. The Dickey-Fuller test has been improved in this way so that it may be used to a larger and more complex family of time series models.

If you are aware with the fundamental concept that underpins the Dickey-Fuller test, you will understand that an advanced Dickey-Fuller test (ADF) is just a more robust form of the regular exam. This will be obvious to you if you have prior knowledge of the Dickey-Fuller test. In 1984, these same statisticians improved upon their simple autoregressive unit root test (the Dickey-Fuller test) by integrating more sophisticated models with unclear order dependencies. This was done in order to test the hypothesis that the unit root is a simple autoregressive process (the "augmented Dickey-Fuller test").

The revised Dickey-Fuller test is a unit root test that functions in a manner that is comparable to the one that was first developed. The most prevalent use of the test may be found in the study of econometrics, which is defined as "the analysis of economic data via the application of mathematics, statistics, and computer technology."

The key difference between the two evaluations is in the fact that the ADF is used for a class of time series models that is both more broad and complicated. The enhanced Dickey-Fuller statistic that is utilized in the ADF test has a value that is in the negative range. People are more likely to disagree with the concept of a single root if the situation is more negative. It goes without saying that this is only a guess. Therefore, it is conceivable to postpone rejecting the unit root null hypothesis even if the ADF test statistic is positive. This may be done by using a different statistical method.

Table 4.2 ADF unit root test

Augmented Dickey Fuller (ADF) Unit Root Test			Order of integration
Variables	Level	1st difference	
GDPP	0.7936	0.0349**	I(1)
FDI	0.0201**	-	I(0)
INF	0.0593	0.0046***	I(1)
NT	0.8919	0.0001***	I(1)
REER	0.1219	0.0002***	I(1)

Source: Akaike info criterion.

*Note: significant level 1*** 5** 10**

The ADF unit root is shown in Table 4.2, and the results reveal that the variables are stationary in two orders, me (0) and me (1).

GDPP, with a p value of 0.0349, is stationary at first difference. FDI is stable at the level (p = 0.2101), whereas inflation (p = 0.0046), the real effective exchange rate (p = 0.0002), and net national trade (p = 0.0001) are stable at the first difference. As a consequence, we decided to do regression analysis using the ARDL model.

4.4 ARDL bound test

The ARDL cointegration method was created by Pesaran and Shin (1999), as well as by Pesaran and colleagues (2000). (2001). In comparison to traditional and more traditional cointegration techniques, it has three benefits. The first advantage is that it is not necessary to integrate all variables in the same order when using the ARDL; it may be used regardless of whether the underlying variables are integrated in order 1, order 0, or fractionally. The ARDL test is also noticeably more effective when applied in circumstances that include limited sample data sets. The application of the ARDL technique affords us with objective long-term model estimations, which brings us to the third and last advantage of using this methodology (Harris and Sollis, 2003).

Table 4.3 ARDL bound test

Model	Lag.	F-Statistics	Decision
GDPP, NT, REER, INF, FDI	(4, 4,4, 4, 4,)	15.74273***	Co-Integration Exist
Bound Critical Value			
		I (0)	I (1)
Sign.	10%	2.2	3.09
	5%	2.56	3.49
	2.5%	2.88	3.87
	1%	3.29	4.37

Note: **at 1percent level of significance **at 5percent level of significance *at 10percent level of significance

Source: Akaike info criterion (AIC) Pesaran et al. suggest the critical value bounds (2001)

The ARDL approach was utilized in the creation of the bound test, which was then applied in order to determine whether or not the data set that was the subject of the inquiry demonstrated co-integration. If the statistic is greater than the upper limit I, the assumption that there is no co-integration should be rejected as a null hypothesis (1). In the absence of a clear statistic, the findings cannot be considered definitive. With the use of the F statistic, we are able to draw the conclusion that the independent factors and the

dependent variable have a long-term link that is statistically significant at the 1%, 5%, and 10% levels of significance (*15.74273*). As a direct consequence of this, we conclude that the absence of co-integration cannot be a valid hypothesis.

4.5 ARDL Short and Long RUN

Table 4.4   ARDL short run test

Short Run				
Variable	Coefficient	Std.Error	T.Statistic	P.Value
D(FDI)	0.0689	0.0165	4.1727	0.0042
D(FDI(-1)	-0.0765	0.0111	-6.8343	0.0002
D(FDI(-2)	-0.1655	0.0237	-6.9663	0.0002
D(FDI(-3)	-0.1268	0.0221	-5.7331	0.0007
D(INF)	0.0014	0.0005	2.8652	0.0242
D(INF(-1)	0.0019	0.0004	4.4185	0.0031
D(REER)	0.0004	0.0001	3.5263	0.0096
D(REER(-1)	0.0008	0.0001	5.5272	0.0009
D(NT)	-9.3513	3.2813	-2.8520	0.0246
D(NT(-1)	-1.5712	4.4113	-3.5612	0.0092
D(NT(-2)	1.8512	4.6813	-3.9598	0.0055
Coint Eq (-1)*	-0.139006	0.0109	-12.7249	0.0000

This source

Table 4.5 long run

Long Run				
Variable	Coef	Std error	s.statistic	P. value
D(FDI)	0.0689	0.0534	1.2898	0.2381
REER	0.0008	0.0003	2.6578	0.0326
NT	2.5012	7.7813	3.2100	0.0149
INF	-0.0024	0.0013	-1.8229	0.111
C	1.8358	0.4337	4.2324	0.0039

*Note ****represent significance at,1%*** 5%** and *10% respectively Source: Long-Run ARDL. Note ****represent significance at ***1% and **5% 10%*respectively Source: ECM*

The findings indicate that inflation has a beneficial influence on GDP. This conclusion is consistent with Munir and Mansur's (2009) analysis of the association between inflation rate and economic growth rate in Malaysia from 1970 to 2005. A particular subject addressed in this research is what the Malaysian threshold inflation rate is. According to the data, Malaysia has a single inflation threshold value. This research clearly suggests that the link between inflation and economic growth is nonlinear. The computed threshold regression model estimates 3.89% as the inflation rate over which inflation substantially slows GDP growth. Furthermore, there is a statistically significant positive association between the inflation rate and growth below the threshold level. Bank Negara (Malaysia's central bank) should pay attention to the inflation phenomenon since significant gains may be made in a low-inflation environment while implementing the new monetary policy.

Thomas D. (2014) did another study that objectively analyzed the influence of exchange rates on the economy. Economic factors such as the currency rate and inflation rate were taken into account while calculating the change in Nigeria's gross domestic product (GDP).

Secondary data from the Annual Reports of the Central Bank of Nigeria (CBN), the Nigerian Stock Exchange (NSE), and the Nigeria Securities and Exchange Commission (SEC) were analyzed using the ordinary least squares (OLS) technique. The results reveal that the two factors exchange rate and inflation rate have a considerable influence on Nigeria's GDP and economic development.

The exchange rate has a negative influence on GDP because as it rises, so does economic growth; however, the inflation rate has a positive impact on GDP, showing that companies are more inclined to create when the inflation rate is high and vice versa.

To enthrone a favorable exchange rate that would boost the nation's GDP, the government is advised to make the Nigerian economic climate investment friendly by restoring the security of lives and property, infrastructural development, and improvement of local production in order to relieve pressure on the dollar. This would

go a long way toward boosting the exchange rate in favor of the naira and therefore improving the GDP.

The findings indicate that inflation has a beneficial impact on the expansion of the Nigerian economy. This is because inflation is most effective at boosting output when the economy is operating below its potential, which means that there is excess capacity in terms of labor or resources. When there is more money available, there will be more purchases made, which will result in a higher total demand. The result of increased demand is an increase in output, which is intended to satisfy that need.

The findings of the ARDL for the short and long runs show that there is a connection between the independent variables and the dependent variables in both the short and long runs. Foreign direct investment is essential in the short run. This result is in line with Omowunmi's (2012) evaluation of the effect of foreign direct investment (FDI) on the growth of the Nigerian economy, which is compatible with this finding. The purpose of foreign direct investment (FDI) is to aid developing nations such as Nigeria in a variety of ways, including the creation of employment, the transfer of technology, an increase in local competitiveness, and the provision of other benefits. The purpose of this article is to provide an answer to the following question: What are the several factors that influence foreign direct investment in Nigeria, and how do these factors impact the economy of Nigeria? The ordinary least square (OLS) regression method was utilized for the investigation of time series data spanning the years 1970 to 2007. In order to account for autocorrelation, the iterative method developed by Cochrane and Orcutt was utilized. The model that is being considered makes the assumption that there is a functional relationship between the economic performance of Nigeria, which is measured by real GDP, and foreign direct investment. According to the findings of the regression analysis, the hypothesis that there is a significant association between foreign direct investment and economic growth in Nigeria, as indicated by prior research, is most certainly not supported by the data. The model research casts doubt on the idea that foreign direct investment (FDI) in Nigeria has a distinct effect on the country's economy, despite the fact that the findings do not imply that FDI is unimportant. On the other hand, there is a negative association between GDP per capita and real exchange rate in Nigeria, which is similarly bad but, in the long run, its insignificant.

Although significant in both the short run and the long run, net trade has a positive association with GDP per capita in the long run but a negative correlation with GDP per capita in the short run. In contrast, the exchange rate is significant but has a negative correlation with economic growth. This conclusion is consistent with the findings of Afolabi, Danladi, and Azeez (2017), who researched the influence of international trade on the development of the Nigerian economy in order to identify the major variables driving economic growth through international trade and to make policy recommendations. This conclusion is consistent with the findings of their research. The Central Bank of Nigeria, the National Bureau of Statistics, and the International Financial Statistics all contributed time series secondary data that was utilized in this study, which covered the period from 1981 to 2014. The augmented Dickey-Fuller (ADF) test and the Phillip-Perron (PP) test of unit root were utilized so that the stationarity properties of the variables could be analyzed. The ordinary least squares (OLS) method was utilized to evaluate whether or not there was a significant connection between GDP and the currency rate, government expenditure, interest rate, foreign direct investment, import, and export. These were all treated as independent variables in the analysis. According to the findings, the expansion of the Nigerian economy is driven by the combination of government spending, interest rates, imports, and exports; the exchange rate and foreign direct investment do not play a role in this expansion.

4.6 Residual diagnostic

An application of the Breusch and Godfrey model using a serial correlation The LM test is used to investigate whether or not the errors generated by a regression model exhibit any kind of autocorrelation. In the subsequent step of the regression analysis, the residuals obtained from the model under consideration are incorporated into the computation of a test statistic. This approach involves residuals. According to the proposition known as the null hypothesis, there is not a single serial connection of any rank up to p. In the field of statistics, the Breusch-Godfrey test is utilized to investigate the correctness of specific modeling assumptions that are made when regression-like models are applied to observed data series. T. S. Breusch (1978) It makes a concerted effort to find serial correlation, which is not accounted for in the recommended model

structure and, if it exists, might result in inaccurate findings from other tests or sub-optimal estimates of the parameters governing the model.

The test may be used to a variety of regression models, including ones in which the lagged values of the dependent variables are utilized as independent variables in the model's representation for future observations. This kind of expression appears rather often in econometric models.

For the purpose of illustrating time-varying financial time series such as FDI, ARDL models are utilized. Heteroscedasticity In ARDL models, it is anticipated that the variance of the current error term will be proportional to the size of the error terms that occurred in prior periods; this will result in volatility clustering. Whether or not a regression model exhibits heteroscedasticity may be determined with the use of the Breusch-Pagan test. The phenomenon known as heteroscedasticity (or heteroscedasticity) occurs when the standard deviations of a predicted variable do not remain constant when compared to the values of other independent variables or to previous time periods. The purpose of a normality test is to assess whether or not a connected random variable is normally distributed as well as whether or not a data collection can be accurately characterized by a normal distribution. A normality test is carried out in order to determine whether or not the data in the sample are distributed in a uniform manner (within a certain range of error).

Table 4.6 residual diagnostic test Results

Tests	Statistic	P value	remarks
Breusch Godfrey LM test (Serial correlation)	0.189	0.7285	No serial correlation
Normality	3.0316	0.2196	Normal distribution
Heteroscedasticity	1.0060	0.4047	Homoscedasticity

Source: This study

The hypothesis predicts a normal distribution, as seen in the table above, as well as no serial correlation or conditional heteroscedasticity. The outcomes of this finding are consistent with what the theory predicted. They are not even close to following a normal

distribution; in fact, they are not even close. Nonetheless, despite the fact that the alternative hypotheses indicate otherwise, the null hypothesis demonstrates that the model does not, in fact, feature serial correlation. To complicate matters further, the probability of this happening is *0.7285*, which is substantially higher than the 0.05% limit and by a factor of 2. In this case, it is deemed that the null hypothesis is accurate, and any thought that the model may show serial correlation is rejected. The model does not demonstrate heteroskedasticity at the 5% significance level as a result of the The hypothesis of nothing. Due to the fact that the significance level is set to 5, this is the result. After going through its paces, this model does not fail to improve and instead remains at the same level. If the likelihood value of *0.4047* is more than the threshold of 0.05 percent, then suggests that the issue is more serious than was first considered to be the case. Because we are unable to reject the null hypothesis when using a significance level of 5%, we are forced to draw the conclusion that the model does not demonstrate heteroskedasticity when using this level of significance. This is the only outcome that makes any sense for us. The data set ought to exhibit a normal distribution between the percentages of 5 and 10%, or anyplace within that range, if we are to accept the null hypothesis. Approximately five percent of the total is comprised of residue frequency distributions. The Jarque-Bera probability cannot be considered significant since the chance of *0.2196*is statistically higher than the criterion of 0.05 percent. As a consequence of this, the likelihood is not considered to be very significant. If the null hypothesis regarding cointegration is correct, then the residuals will have a normal distribution at the 5% significance level.

4.7 Granger Causality Test

Table 4.7 Pairwise Granger Causality Test

Null Hypothesis	Obs.	F-Statistic	Prob.
FDI does not Granger Cause GDP.	29	0.79790	0.4619
GDP does not Granger Cause FDI		0.13597	0.8735
INF does not Granger Causes GDP	29	0.61386	0.5495
GDP does not Granger cause INF		3.03452	0.0668
NT does not Granger Cause GDP	29	6.41730	0.0059

GDP does not Granger Cause NT		0.97212	0.3927
REER does not Granger Cause GDP	29	0.55018	0.5839
GDP does not Granger Cause REER		0.50702	0.6086
INF does not Granger Cause FDI	29	6.44406	0.0058
FDI does not Granger Cause INF		11.2837	0.0004**
NT does not Granger Cause FDI	29	0.08629	0.9176
FDI does not Granger Cause NT		0.01612	0.9840
REER does not Granger Cause FDI	29	0.58955	0.5624
FDI does not Granger Cause REER		3.34214	0.0524
NT does not Granger Cause INF	29	0.16702	0.8472
INF does not Granger Cause NT		0.02477	0.9756
REER does not Granger Cause INF	29	1.52290	0.2384
INF does not Granger Cause REER		6.28897	0.0064
REER does not Granger Cause INF	29	0.35246	0.7065
NT does not Granger Cause REER		0.07658	0.9265

Source: This study

In the research process for analyzing the dynamic links between time series, the notion of causality, as articulated by Wiener (1956) and Granger (1969), is a key component that must be present. Predictability is emphasized in the study of Wiener-Granger causality; this is one of the reasons why economists and policymakers value the theory so highly. Granger causality is a method that is often explored and used in practice for the analysis of bivariate systems. However, if there are more than two criteria involved, it is feasible for there to be many outcomes. The findings demonstrate that the factors may have both unidirectional and bidirectional effects on each other. At a 5% level of considerable inflation, does Granger cause the exchange rate, but exchange rate does not Granger cause inflation; this demonstrates that the link among the two variables only goes in one direction. Both foreign direct investment and the inflation exhibit bidirectional causation. FDI increases the exchange rate by 5%, but the exchange rate has a marginal impact on foreign direct investment. Foreign direct investment (FDI) and

inflation both move in the same direction, as indicated by a granger causality coefficient of 5% between the two variables.

4.8 Stability

It is not common for nonlinear models to exhibit parameter instability (Saliminezhad et al., 2018). As a consequence of this, the consistency of the approximated model that was utilized has to be reviewed so that the validity of the outcomes can be verified. In order to do this, we make use of the CUSUM of Squares Test developed by Brown and his colleagues (1975). During the process of estimation, the stability of the model needs to be preserved at all times; this need is contingent on how much confidence one has in the results of the post-estimation test (Hansen, 2000). In a research including numerous linear regressions, cusum tests are utilized to check the stability of the coefficients. For the purpose of inference, the sums or sums of squares of recursive residuals, also known as standardized one-step-ahead prediction errors that are formed from nested subsamples of data are utilized. The parameters of the null hypothesis are identical to those of the null hypothesis. In other words, the null hypothesis has parameters that are identical to those of the null hypothesis.
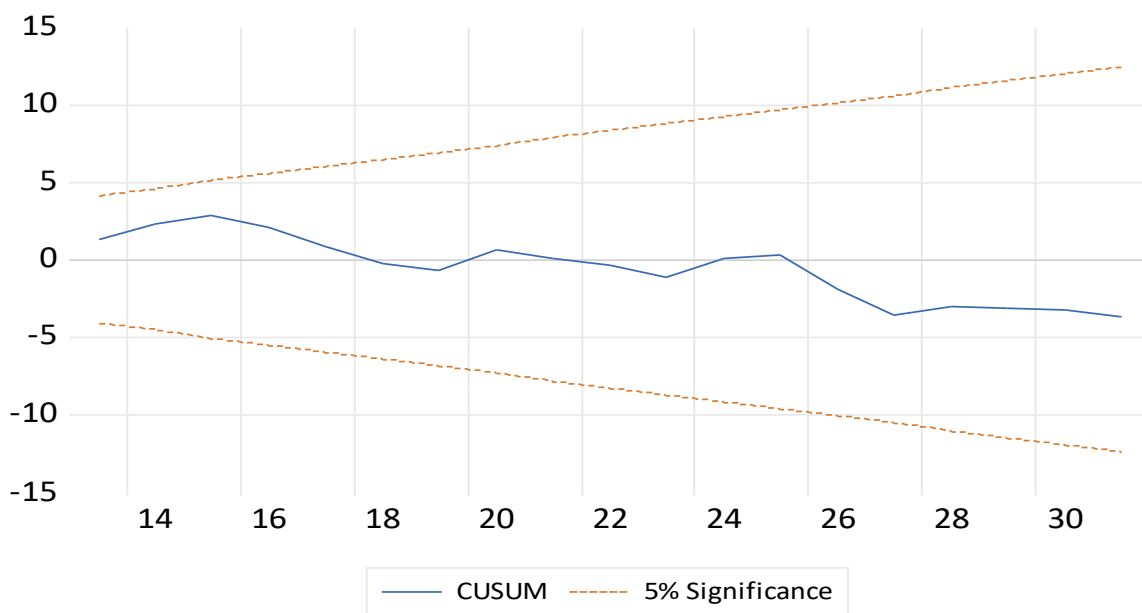
Figure 4.1 CUSUM TEST

Figure 4.2 CUSUM OF SQUARE
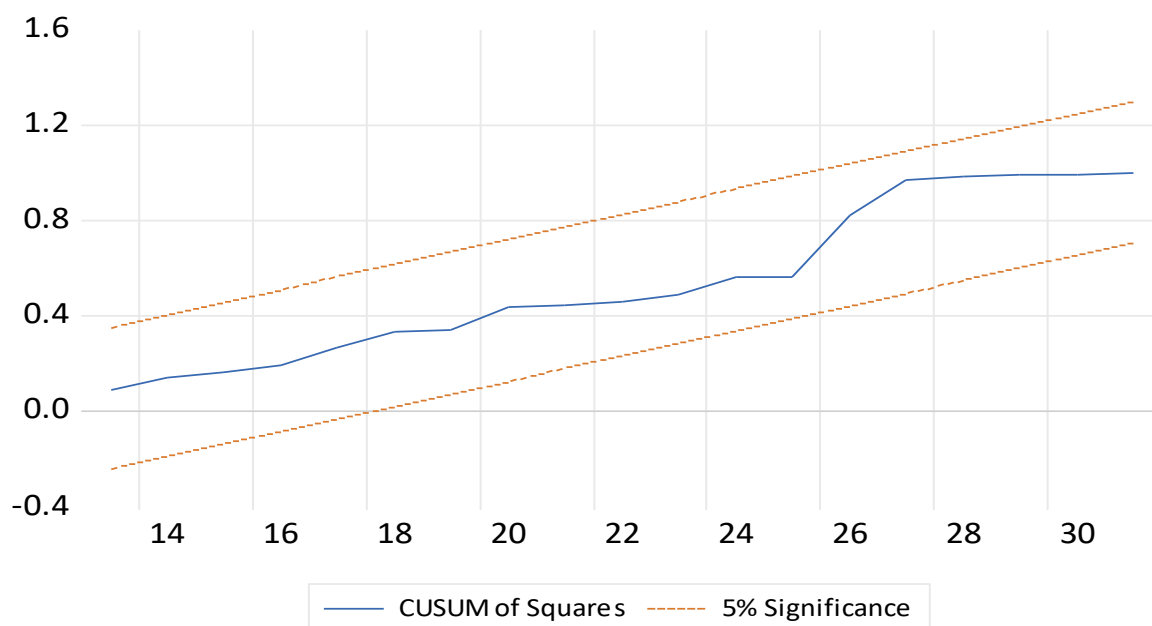
There is no evidence to support the alternative hypothesis, despite the fact that there is a theory known as the null hypothesis, which asserts that the parameters are constant. According to the findings of the experiment, the blue line is unable to go farther into the territory occupied by the red line. We want to assume that the residual variances are stable rather than unstable, therefore we will go with the null hypothesis rather than the alternative hypothesis. This will induce us to accept the null hypothesis. This will make things much worse than they already are. In addition, we found that the residual variance has a greater tendency toward stability than it does toward instability. The final step was to compare the long-term stability of the ARDL model's long-term coefficient to the short-term dynamics of the variables representing foreign direct investment, net trade, and economic growth using the cumulative sums of recursive residuals (CUSUM) and cumulative sums of squares (CUSUMQ). Both of these approaches are referred to as "cumulative sums" in the field of mathematics. The assumption behind the null hypothesis is that, within a 5% confidence interval, there is not a single detectable deviation in any of the error correction coefficients that are made available by the error correction model. Ng, Bahmani, and Oskooee (2002) It is possible, at a level of significance of 5%, to reject the null hypothesis of consistent coefficients if it is demonstrated that any of the lines have been crossed. The data presentation for CUSUM

and CUSUMQ must adhere to the fundamental constraints shown in the previous image. Because of this, the coefficient for foreign direct investment and net trade will be guaranteed to remain stable throughout the course of time. The findings suggest that the data set does not exhibit any significant fluctuations.

CHAPTER V

Summery, Conclusion and Recommendations

5.1 Summery

This thesis examines the role of FDI in Nigeria's sustainable development (1990–2020). Foreign direct investment refers to commercial investments made in nations other than the investor's home country. These investments often involve the creation of local manufacturing facilities or the purchase of an existing company through the process of mergers and acquisitions (through Greenfeld) (Rutherford, 1995: pp. 178–179). When compared to the period that came before it, a rise in a nation's overall capacity to create goods and services within a specific time period is one way to describe the nation's progression toward sustainable development. The concept of sustainable development, on the other hand, has been discussed in many different pieces of literature throughout the course of time and has undergone a number of shifts and mutations. In a report that was completed in 1987, the Brundtland Commission provided its definition of sustainable development. According to this definition, sustainable development is "progress that fulfills the demands of the present without hurting future generations' capacity to satisfy their own needs."

Both globalization and the global economy are rendered inoperable in the absence of FDI. It is essential for all growing economies, including Nigeria's, to receive direct investment from other countries. Foreign direct investment has a significant and costly impact on the economies and financial situations of developing countries. FDI is also an important driver of employment, technical advancement, greater productivity, improved human capital development, infrastructure development, the foreign exchange rate, a competitive business environment, the investment tax revenue gap, and, ultimately, economic growth in the host nation. Foreign direct investment also enables investors to quickly decrease their debt. Investors may mitigate the effect of probable unfavorable outcomes on their portfolios by diversifying their assets across other nations (Kleinert, J. 2001). FDI is essential to the development of Africa because it has the potential to replenish the continent's domestic savings, stimulate economic growth and job creation, integrate the continent into the global economy, spread cutting-edge technology, increase productivity, and improve the capabilities of local laborers.

FDI is rising in relevance for developing nations, many of which are driven by the notion that more foreign direct investment (FDI) would be good for their economies. FDI has a big influence on the societies, cultures, economies, and politics of the nations that receive it. In recent decades, wealthier nation in general and advanced countries in particular have put a high value on FDI as a driver of sustainable development and improvement. The influence of FDI on economic development has long been a topic of concern for a large number of economists. In a closed economy, investments can only be undertaken using local resources since there is no access to money from other nations. Investments in an open economy are backed not just by domestic savings but also by domestic savings and international capital flows, such as foreign direct investment (FDI). China is an excellent example because the communist state maintained a rigid and antiquated political framework while pursuing massive economic changes. Following America in the 1990s, China became one of the countries that got the greatest assistance.

Gaining an Understanding of the Effects That Direct Investment from Abroad Has on Sustainable Development For the purpose of this thesis, the ARDL model was applied in Nigeria. The ARDL cointegration method was created by Pesaran and Shin (1999), as well as by Pesaran and colleagues (2000). (2001). In comparison to traditional and more traditional cointegration techniques, it has three benefits. The first advantage is that it is not necessary to integrate all variables in the same order when using the ARDL; it may be used regardless of whether the underlying variables are integrated in order 1, order 0, or fractionally. The ARDL test is also noticeably more effective when applied in circumstances that include limited sample data sets. The acquisition of unbiased estimates of the long-term model is the first and third benefits that come as a result of utilizing the ARDL methodology (Harris and Sollis, 2003).

According to Manh-Tung, the collection of data is a crucial part of the research process in all fields of academic inquiry, including the hard and social sciences, the arts and humanities, and the business world (2018). Although the techniques vary depending on the area, the primary focus is always on ensuring that the data collected is accurate and honest. Any attempt made to collect data should have as its ultimate goal the gathering of credible, high-quality information that, once assessed, can provide answers

that are both convincing and reliable to the problems at hand. When carrying out a census, there are a total of seven processes involved in the sampling process, as well as four methods that are utilized to collect and evaluate data. Accurate data collection is required in order to preserve the integrity of research. In order to investigate the impact that FDI would have on Nigeria's long-term economic growth, the data used in this study was collected from 1990 to 2020 through the use of the data portal provided by the World Bank. It is very necessary to take an organized approach to the collection of data in order to ensure that the information obtained is accurate as well as specific. Databases are vital resources for the World Bank, serving both to bolster crucial management choices and to supply the institution with crucial statistical data for its operations. The establishment of standards and norms that are recognized on a worldwide scale provides a source of information that is reliable and consistent. The development of baselines, the identification of successful public and private initiatives, the definition of goals and targets, the monitoring of progress, and the evaluation of outcomes all require accurate data. Individuals are able to examine the actions of the government and actively participate in the process of development thanks to the availability of such tools, making them an essential component of efficient governance.

The ADF unit root is shown in Table 4.2, and the results reveal that the variables are stationary in two orders, me (0) and me (1).

GDPP, with a p value of 0.0349, is stationary at first difference. FDI is stable at the level (p = 0.2101), whereas inflation (p = 0.0046), the real effective exchange rate (p = 0.0002), and net national trade (p = 0.0001) are stable at the first difference. As a consequence, we decided to do regression analysis using the ARDL model.

In the meanwhile, the results of the ARDL bound test indicate that the independent variable and the dependent variable have a long-term correlation that is statistically significant at the 1%, 5%, and 10% levels of significance when the F statistic is used (15.74273). As a direct result of this, we do not accept the null hypothesis that there is no such thing as co-integration. In addition, The findings of the ARDL for the short and long runs show that there is a connection between the independent variables and the dependent variables in both the short and long runs. Foreign direct investment is essential in the short run. This result is in line with Omowunmi's (2012) evaluation of

the effect of foreign direct investment (FDI) on the growth of the Nigerian economy, which is compatible with this finding. The purpose of foreign direct investment (FDI) is to aid developing nations such as Nigeria in a variety of ways, including the creation of employment, the transfer of technology, an increase in local competitiveness, and the provision of other benefits. The purpose of this article is to provide an answer to the following question: What are the several factors that influence foreign direct investment in Nigeria, and how do these factors impact the economy of Nigeria? The ordinary least square (OLS) regression method was utilized for the investigation of time series data spanning the years 1970 to 2007. In order to account for autocorrelation, the iterative method developed by Cochrane and Orcutt was utilized. The model that is being considered makes the assumption that there is a functional relationship between the economic performance of Nigeria, which is measured by real GDP, and foreign direct investment. According to the findings of the regression analysis, the hypothesis that there is a significant association between foreign direct investment and economic growth in Nigeria, as indicated by prior research, is most certainly not supported by the data. The model research casts doubt on the idea that foreign direct investment (FDI) in Nigeria has a distinct effect on the country's economy, despite the fact that the findings do not imply that FDI is unimportant. On the other hand, there is a negative association between GDP per capita and real exchange rate in Nigeria, which is similarly bad but, in the long run, its insignificant.

Although significant in both the short run and the long run, net trade has a positive association with GDP per capita in the long run but a negative correlation with GDP per capita in the short run. In contrast, the exchange rate is significant but has a negative correlation with economic growth. This conclusion is consistent with the findings of Afolabi, Danladi, and Azeez (2017), who researched the influence of international trade on the development of the Nigerian economy in order to identify the major variables driving economic growth through international trade and to make policy recommendations. This conclusion is consistent with the findings of their research. The Central Bank of Nigeria, the National Bureau of Statistics, and the International Financial Statistics all contributed time series secondary data that was utilized in this study, which covered the period from 1981 to 2014. The augmented Dickey-Fuller

(ADF) test and the Phillip-Perron (PP) test of unit root were utilized so that the stationarity properties of the variables could be analyzed. The ordinary least squares (OLS) method was utilized to evaluate whether or not there was a significant connection between GDP and the currency rate, government expenditure, interest rate, foreign direct investment, import, and export. These were all treated as independent variables in the analysis. According to the findings, the expansion of the Nigerian economy is driven by the combination of government spending, interest rates, imports, and exports; the exchange rate and foreign direct investment do not play a role in this expansion.

The hypothesis predicts a normal distribution, as seen in the table above, as well as no serial correlation or conditional heteroscedasticity. The outcomes of this finding are consistent with what the theory predicted. They are not even close to following a normal distribution; in fact, they are not even close. Nonetheless, despite the fact that the alternative hypotheses indicate otherwise, the null hypothesis demonstrates that the model does not, in fact, feature serial correlation. To complicate matters further, the probability of this happening is *0.7285*, which is substantially higher than the 0.05% limit and by a factor of 2. In this case, it is deemed that the null hypothesis is accurate, and any thought that the model may show serial correlation is rejected. The model does not demonstrate heteroskedasticity at the 5% significance level as a result of the hypothesis of nothing. Due to the fact that the significance level is set to 5, this is the result. After going through its paces, this model does not fail to improve and instead remains at the same level. If the likelihood value of *0.4047* is more than the threshold of 0.05 percent, then suggests that the issue is more serious than was first considered to be the case. Because we are unable to reject the null hypothesis when using a significance level of 5%, we are forced to draw the conclusion that the model does not demonstrate heteroskedasticity when using this level of significance. This is the only outcome that makes any sense for us. The data set ought to exhibit a normal distribution between the percentages of 5 and 10%, or anyplace within that range, if we are to accept the null hypothesis. Approximately five percent of the total is comprised of residue frequency distributions. The Jarque-Bera probability cannot be considered significant since the chance of *0.2196*is statistically higher than the criterion of 0.05 percent. As a consequence of this, the likelihood is not considered to be very significant. If the null

hypothesis regarding cointegration is correct, then the residuals will have a normal distribution at the 5% significance level. The next step was to compare the long-term stability of the ARDL model's long-term coefficient to the short-term dynamics of the variables FDI, net trade, and economic growth using the cumulative sums of recursive residuals (CUSUM) and cumulative sums of squares (CUSUMQ). Both of these methods are together referred to as "cumulative sums." According to the null hypothesis, there is no variation in any of the error correction coefficients that are given in the error correction model within a range of confidence that corresponds to 5% of the total value. Oskooee, Bahmani, and Ng (2002) if any of the lines are shown to be crossed, then the null hypothesis of consistent coefficients can be rejected with a significance level of 5%. The CUSUM and CUSUMQ data displays are required to conform to the primary restrictions shown in the graphic to the left. As a result, this ensures that the coefficients for foreign direct investment and net trade will remain stable throughout the course of time. According to the findings, the data set appears to be consistent. Investments made from outside the country are a powerful tool in both economic and social growth (FDI). When looking at two different time periods, economic growth may be defined as an increase in an economy's capacity to deliver both commodities and services to consumers. The rate of economic expansion may be evaluated not only in nominal terms, but also in real terms, which take inflation into account. Utilize gross domestic product or gross national product per capita to account for differences in population when making international comparisons of economic growth rates. A percentage indication of the health of an economy over a period of time, the economic growth rate measures the pace at which the economy is growing.

5.2 Conclusion

This dissertation investigates the impact that direct foreign investment has had on Nigeria's economy over the long term (1990–2020). Investments made in countries other than the one in which the investor resides are considered to be examples of "foreign direct investment." These investments often involve the establishment of new manufacturing facilities in the surrounding area or the purchase of an existing business through the process of mergers and acquisitions (through Greenfeld) (Rutherford, 1995:

pp. 178–179). When compared to the time period before, an increase in a nation's overall ability to create products and services is one definition of what constitutes sustainable development in that nation. Nevertheless, during the course of its existence, sustainable development has, over the course of time, been discussed in a variety of written works and has gone through a number of transitions and modifications. The Brundtland Commission, which conducted research in 1987, provided the following definition of sustainable development: "growth that satisfies the expectations of the present without risking the ability of future generations to satisfy their own demands." According to the United Nations Conference on Trade and Development (UNCTAD), there was a school of thought that believed foreign direct investment may be detrimental to the economies of developing nations (2000). After a period of uninterrupted economic growth lasting more than four decades, this concept arose. Over the course of the past two decades, foreign direct investment (FDI) has seen significant growth around the globe. According to Manh-Tung, the collection of data is a crucial part of the research process in all fields of academic inquiry, including the hard and social sciences, the arts and humanities, and the business world (2018). Although the techniques vary depending on the area, the primary focus is always on ensuring that the data collected is accurate and honest. Any attempt made to collect data should have as its ultimate goal the gathering of credible, high-quality information that, once assessed, can provide answers that are both convincing and reliable to the problems at hand. When carrying out a census, there are a total of seven processes involved in the sampling process, as well as four methods that are utilized to collect and evaluate data. Accurate data collection is required in order to preserve the integrity of research. In order to investigate the impact that FDI would have on Nigeria's long-term economic growth, the data used in this study was collected from 1990 to 2020 through the use of the data portal provided by the World Bank. It is very necessary to take an organized approach to the collection of data in order to ensure that the information obtained is accurate as well as specific. Databases are vital resources for the World Bank, serving both to bolster crucial management choices and to supply the institution with crucial statistical data for its operations. The establishment of standards and norms that are recognized on a worldwide scale provides a source of information that is reliable and consistent. The

development of baselines, the identification of successful public and private initiatives, the definition of goals and targets, the monitoring of progress, and the evaluation of outcomes all require accurate data. Individuals are able to examine the actions of the government and actively participate in the process of development thanks to the availability of such tools, making them an essential component of efficient governance. The ARDL methodology was applied in order to create the bound test, which was then utilized in order to establish whether or not the data set that was being considered displayed co-integration. If the statistic is greater than the upper limit I, we cannot accept the null hypothesis that there is no co-integration (1). The results are inconclusive if the value is within the allowable limits but falls outside of either. From the F statistic, we may deduce that the independent variables and the dependent variable have a long-term association that is statistically significant at the 1%, 5%, and 10% levels of significance respectively (15.74273). As a direct result of this, we do not accept the null hypothesis that there is no such thing as co-integration. The findings of the ARDL for the short and long runs show that there is a connection between the independent variables and the dependent variables in both the short and long runs. Foreign direct investment is essential in the short run. This result is in line with Omowunmi's (2012) evaluation of the effect of foreign direct investment (FDI) on the growth of the Nigerian economy, which is compatible with this finding. The purpose of foreign direct investment (FDI) is to aid developing nations such as Nigeria in a variety of ways, including the creation of employment, the transfer of technology, an increase in local competitiveness, and the provision of other benefits. The purpose of this article is to provide an answer to the following question: What are the several factors that influence foreign direct investment in Nigeria, and how do these factors impact the economy of Nigeria? The ordinary least square (OLS) regression method was utilized for the investigation of time series data spanning the years 1970 to 2007. In order to account for autocorrelation, the iterative method developed by Cochrane and Orcutt was utilized. The model that is being considered makes the assumption that there is a functional relationship between the economic performance of Nigeria, which is measured by real GDP, and foreign direct investment. According to the findings of the regression analysis, the hypothesis that there is a significant association between foreign direct

investment and economic growth in Nigeria, as indicated by prior research, is most certainly not supported by the data. The model research casts doubt on the idea that foreign direct investment (FDI) in Nigeria has a distinct effect on the country's economy, despite the fact that the findings do not imply that FDI is unimportant. On the other hand, there is a negative association between GDP per capita and real exchange rate in Nigeria, which is similarly bad but, in the long run, its insignificant.

Although significant in both the short run and the long run, net trade has a positive association with GDP per capita in the long run but a negative correlation with GDP per capita in the short run. In contrast, the exchange rate is significant but has a negative correlation with economic growth. This conclusion is consistent with the findings of Afolabi, Danladi, and Azeez (2017), who researched the influence of international trade on the development of the Nigerian economy in order to identify the major variables driving economic growth through international trade and to make policy recommendations. This conclusion is consistent with the findings of their research. The Central Bank of Nigeria, the National Bureau of Statistics, and the International Financial Statistics all contributed time series secondary data that was utilized in this study, which covered the period from 1981 to 2014. The augmented Dickey-Fuller (ADF) test and the Phillip-Perron (PP) test of unit root were utilized so that the stationarity properties of the variables could be analyzed. The ordinary least squares (OLS) method was utilized to evaluate whether or not there was a significant connection between GDP and the currency rate, government expenditure, interest rate, foreign direct investment, import, and export. These were all treated as independent variables in the analysis. According to the findings, the expansion of the Nigerian economy is driven by the combination of government spending, interest rates, imports, and exports; the exchange rate and foreign direct investment do not play a role in this expansion.

Meanwhile, the findings demonstrate that the factors may have both unidirectional and bidirectional effects on each other. At a 5% level of considerable inflation, does Granger cause the exchange rate, but exchange rate does not Granger cause inflation; this demonstrates that the link among the two variables only goes in one direction. Both foreign direct investment and the inflation exhibit bidirectional causation. FDI increases the exchange rate by 5%, but the exchange rate has a marginal impact on foreign direct

investment. Foreign direct investment (FDI) and inflation both move in the same direction, as indicated by a granger causality coefficient of 5% between the two variables.

5.3 Recommendations

In light of the aforementioned, we strongly recommend that both the government and the private sector step up their efforts to increase the amount of foreign direct investment (FDI) flowing into non-oil sectors of the economy. This is because FDI has a long-term positive association with the Nigerian economy, which makes it an attractive investment option. This step will contribute to the diversification of the economy in Nigeria. It should not come as a shock that Mahembe and Odhiambo (2014) believe that foreign direct investment has the potential to stimulate economic expansion. In addition, the government and private sectors should not give up on their aim of attracting foreign direct investment in the oil business sectors of the economy, which runs against to one of the suggestions that Nnamdi (2018) made. Instead, they should work to devise workable solutions inside the oil business portions of the economy. These solutions should make it possible for foreign direct investments in that sector to provide the outcomes that are necessary for Nigeria's economic development.

The government need to reexamine the mandate that businesses use local materials and labor. Instead of depending on foreign direct investment as the major economic engine, the government of Nigeria and its citizens should work to increase the amount of investment made within the country to speed up progress. Nigeria should enact a code of conduct for multinational corporations to ensure that a significant portion of their earnings are reinvested in the Nigerian economy, limit the amount of earnings they can repatriate from Nigeria, and limit the amount of restrictive business practices they can engage in. Due to the fact that foreign direct investment (FDI) and economic growth in Nigeria are inextricably linked, the Nigerian government may be able to provide genuine support for FDI inflows into the country by lowering the nation's overall level of insecurity, increasing the availability of social amenities, and implementing any other necessary actions that would result in economic growth in Nigeria.

Reference

Abebefe, H. A. (1995). The structure of Nigeria's external trade: a focus on exports. *Bullion*, *19*(4), 6.

Adaramola, A.O. and Obisesan, O.G. (2015). Impact of Foreign Direct Investment on Nigerian Capital Market Development. International Journal of Academic Research in Accounting, Finance and Management Sciences, 5(1), pp103 – 103

Adenikinju, A. 2005. *Productivity performance in developing countries*, Country case studies, Occasional paper Nigeria

Afolabi, B., Danladi, J. D., & Azeez, M. I. (2017). International trade and economic growth in Nigeria. *Global Journal of Human-Social Science: Economics*, *17*(5), 1-12.

Akinlo, A. E. (2004). Foreign direct investment and growth in Nigeria: An empirical investigation. *Journal of Policy modeling*, *26*(5), 627-639.

Amiesa, F. S., Omowunmi, I., & Joseph, A. A. (2018, August). Economic evaluation of the dual petroleum tax system proposed in the 2017 Nigeria Fiscal Reform Framework. In *SPE Nigeria Annual International Conference and Exhibition*. OnePetro.

Anderson, T. W., & Hsiao, C. (1982). Formulation and estimation of dynamic models using panel data. *Journal of econometrics*, *18*(1), 47-82.

Andrews, Richard N. 1997. "Property, Participation, and 'Pendulum' Politics: The Case of the United States." Chapel Hill, NC: Department of Engineering and Environmental Sciences, University of North Carolina.

Antonelli, C. (1995). *The economics of localized technological change and industrial dynamics* (Vol. 3). Springer Science & Business Media.

Asiedu, E. (2002). On the determinants of foreign direct investment to developing countries: Is Africa different? World Development, 30(1), 107-119

Bahmani-Oskooee, M., & Ng, R. C. W. (2002). Long-run demand for money in Hong Kong: an application of the ARDL model. *International journal of business and economics*, *1*(2), 147.

Bailliu, J., Lafrance, R., & Perrault, J. F. (2003). Does exchange rate policy matter for growth?. *International Finance*, *6*(3), 381-414.

Balassa, B (1978). ―Exports and Economic Growth: Further Evidence‖. Journal of Development Economics. 5:181-189, June

Bankole, S. A., & Mabekoje, O. O. (2004). Occurrence of aflatoxins and fumonisins in preharvest maize from south-western Nigeria. *Food additives and contaminants*, *21*(3), 251-255.

Barua, R., Jiménez-Villacorta, F., & Lewis, L. H. (2013). Predicting magnetostructural trends in FeRh-based ternary systems. *Applied Physics Letters*, *103*(10), 102407.

Bergsten, C. F., Horst, T. and Moran, T. H. 1978. *American Multinationals and American Interests*, Washington, D.C.: Brookings Institution

Bildirici, M., & Gokmenoglu, S. M. (2020). The impact of terrorism and FDI on environmental pollution: evidence from Afghanistan, Iraq, Nigeria, Pakistan, Philippines, Syria, Somalia, Thailand and Yemen. *Environmental Impact Assessment Review*, *81*, 106340.

Blomström, M., Kokko, A., & Globerman, S. (2001). The determinants of host country spillovers from foreign direct investment: a review and synthesis of the literature. *Inward Investment Technological Change and Growth*, 34-65.

Bressler, S. L., & Seth, A. K. (2011). Wiener–Granger causality: a well established methodology. *Neuroimage*, *58*(2), 323-329.

Breusch, T. S., & Pagan, A. R. (1980). The Lagrange multiplier test and its applications to model specification in econometrics. *The review of economic studies*, *47*(1), 239-253.

Buch, C. M., & Kleinert, J. (2007). *Multinational firms and new protectionisms* (No. 33). IAW Diskussionspapiere.

Buch, C. M., Kleinert, J., Lipponer, A., Toubal, F., & Baldwin, R. (2005). Determinants and effects of foreign direct investment: evidence from German firm-level data. *Economic policy*, *20*(41), 52-110.

Buckley, P. J., & Casson, M. C. (1996). An economic model of international joint venture strategy. Journal of International Business Studies, 27(5): 849–876

Buckley, Peter J. (2000): Cross-Border Governance in Multinational Enterprises.

Calvo, G. A., & Mendoza, E. G. (1996). Mexico's balance-of-payments crisis: a chronicle of a death foretold. *Journal of international Economics*, *41*(3-4), 235-264.

Calvo, G. A., Reinhart, C. M., & Vegh, C. A. (1995). Targeting the real exchange rate: theory and evidence. *Journal of development economics*, *47*(1), 97-133.

Canh, P. N., Schinckus, C., & Dinh Thanh, S. (2021). What are the drivers of shadow economy? A further evidence of economic integration and institutional quality. *The Journal of International Trade & Economic Development*, *30*(1), 47-67.

Carter, C., & Harding, A. (Eds.). (2011). *Special economic zones in Asian market economies*. New York: Routledge.

Caves, R.E. (1974). Causes of Direct Investment: Foreign Firms Shares in Canadian and United Kingdom Manufacturing Industries. *Review of Economics and Statistics*, 56 August: 272–293

Corsetti, G., Pesenti, P. A., & Roubini, N. (1998). What caused the Asian currency and financial crisis? Part II: The policy debate.

Corsetti, Giancarlo, and Paolo A. Pesenti (1999), "Stability, Asymmetry and Discontinuity: The Launch of European Monetary Union". Brookings Papers on Economic Activity, 2, pp.295-358

Delios, A., & Henisz, W. J. (2003). Political hazards, experience, and sequential entry strategies: The international expansion of Japanese firms, 1980–1998. *Strategic management journal*, *24*(11), 1153-1164.

Diyamett, B., Ngowi, P., & Mutambala, M. (2011). The Role of Foreign Direct Investment (FDI) in Local Technological Capability Building: The Case of Tanzania. *African Technology Studies (ATPS)–Tanzania*.

Drazen, A. (1981). Inflation and capital accumulation under a finite horizon. *Journal of Monetary Economics*, *8*(2), 247-260.

Duce, M., & España, B. D. (2003). Definitions of foreign direct investment (FDI): A methodological note. *Banco de Espana*, *6*(2), 43-49.

Dufour, J. M., & Renault, E. (1998). Short run and long run causality in time series: theory. *Econometrica*, 1099-1125.

Effiong, U. E., & Inyang, N. F. (2021). Foreign Direct Investment Led Growth Hypothesis and Economic Development in Nigeria. *Randwick International of Social Science Journal*, *2*(4), 376-393.

Eichler, M. (2007). Granger causality and path diagrams for multivariate time series. *Journal of Econometrics*, *137*(2), 334-353.

Endresen, S. B. & H. Jauch. 2001. Export Processing Zones in Namibia: Taking A Closer Look. Second Edition. LaRRI, Windhoek

Fatukasi B (2012). Determinants of inflation in Nigeria: An empirical Analysis. Int. J. Humanit. Soc. Sci. Special issue Bus. Soc. Sci. pp. 262- 271. www.ijhssnet.com. downloaded on 20/02/2013

Findlay, R. (1978). Relative backwardness, direct foreign investment and the transfer of technology: A simple dynamic model. Quarterly Journal of Economics, 9,1-16.

Firebaugh, Glenn, 1992, Growth Effects of Foreign and Domestic Investment, American Journal of Sociology 8, 105–130

Froot, K.A. and Stein, J.C. (1991) "Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach", Quarterly Journal of Economics (1991) 11911217.

Gast, M., & Herrmann, R. (2008). Determinants of foreign direct investment of OECD countries 1991–2001. *International Economic Journal*, *22*(4), 509-524.

Gastanaga, V. M., Nugent, J. B., & Pashamova, B. (1998). Host country reforms and FDI inflows: How much difference do they make? World Development, 26(7), 1299-1314

Gay, D. Robert Jr. (2008), Effect of Macroeconomic Variables on Stock Market Returns for Four Emerging Economies: Brazil, Russia, India, and China, International Business and Economics Research Journal, March

Ghaziuddin, M., Butler, E., Tsai, L., & Ghaziuddin, N. (1994). Is clumsiness a marker for Asperger syndrome?. *Journal of Intellectual Disability Research*, *38*(5), 519-527.

Ghosh, A. R., Gulde, A. M., Ostry, J. D., & Wolf, H. C. (1997). Does the nominal exchange rate regime matter?.

Girma, F. D. (2012) Relationship between Inflation and Economic Growth in Ethiopia: An Empirical Analysis, 1980-2011.Oslo: Department of Economics, University of Oslo

Görg, H., & Greenaway, D. (2004). Much ado about nothing? Do domestic firms really benefit from foreign direct investment?. *The World Bank Research Observer*, *19*(2), 171-197.

Granger, C., 1969. Investigating causal relations by econometric models and crossspectral methods. Econometrica 37, 424–438.

Greenaway, D., Sousa, N., & Wakelin, K. (2004). Do domestic firms learn to export from multinationals?. *European Journal of Political Economy*, *20*(4), 1027-1043.

Greenidge, K., & DaCosta, D. (2009). Determinants of Inflation in Selected Caribbean Countries. *Journal of Business, Finance & Economics in Emerging Economies*, *4*(2).

Grossman, G.M., Helpman, E., 1991. Trade,knowledge spillovers and growth. Eur. Econo. Rev. 35 (2-3), 517–526. https://doi.org/10.1016/0014-2921(91)90153-A. Grossman, G.M., Krueger, A.B., 1995. Economic growth and environment. Q.J. Econ. 110 (2), 353–377.

Hansen, B. Sample Splitting and Threshold Estimation, Econometrica, Vol. 68 (May), pp. 575–603, 2000.

Harris, R., & Sollis, R. (2003). *Applied time series modeling and forecasting*. West Sussex: Wiley

Harris, T., & Seid, E. H. (2021). *2019/20 survey of the Ethiopian tax system* (No. R187). IFS Report.

Helpman, E. & Grossman, G. M (2015). Globalization and growth. *American Economic Review*, *105*(5), 100-104.

Hymer, S. 1960. *The International Operations of National Firms: A Study of Direct Investment*, MIT. Ph.D. Dissertation, published by MIT Press under same title in 1976

Iyoha, M. (2001) "Determinants of Foreign Investment in Nigeria" The Nigerian Economic and Financial Review Vol. 6 December 2001 No. 2

Jhingan M. L., (2012). Money, Banking, International Trade and Public Finance. (8thed.) India: Delhi.Vrinda pub.ltd

Jones, J., & Wren, C. (2016). *Foreign direct investment and the regional economy*. Routledge.

Kennedy, K. C. (2000). Foreign direct investment and competition policy at the World Trade Organization. *Geo. Wash. Int'l L. Rev.*, *33*, 585.

Kojima, K., 1978, Direct Foreign Investment: A Japanese Model of Multinational Business Operations, London: Croom Helm

Krugman, P., Obstfeld, M., & Melitz, M. (2017). International Economics: Theory and Policy, the latest edition.

Kwanashie, M., Ajilima, I., & Garba, A. G. (1998). The Nigerian economy: Response of agriculture to adjustment policies.

Lee, K. R., Shim, S. W., Jeong, B. S., & Hwang, J. T. (2003). Knowledge-intensive service activities (KISA) in Korea's innovation system. *Science & Technology Policy Institute (STEPI)*.

Mahembe, E. (2014). *Foreign direct investment inflows and economic growth in SADC countries: a panel data approach* (Doctoral dissertation, University of South Africa).

Mankiw, N. G., D. Romer, and D. N. Weil. (1992). A contribution to the empirics of economic growth. Quarterly Journal of Economics 107(May):407-437

Moosa, I.A. 2009. "The Determinants of Foreign Direct Investment in MENA Countries: An Extreme Bounds Analysis." Journal of Applied Economics Letters 16: 1559–1563.

Moses, C. O., Anigbogu, T. U., Okoli, M. I., & Anyanwu, K. N. (2013). Domestic investment and foreign direct investment flows in Nigeria. *IOSR Journal of Humanities and Social Science*, *13*(6), 1-12.

Mundell, R. (1963). Inflation and Real Interest. The Journal of Political Economy, vol. 71, No. 3, pp.280-283.

Munir, Q., Mansur, K., & Furuoka, F. (2009). Inflation and economic growth in Malaysia: A threshold regression approach. *ASEAN Economic Bulletin*, 180-193.

Nnamdi, I. S., & Eniekezimene, D. E. (2018). Foreign direct investment inflows and economic performance in a developing economy: Nigerian evidence. *European Journal of Business and Management*, *10*(6), 104-113.

Novaes, A. D. (1993). Revisiting the inertial inflation hypothesis for Brazil. *Journal of Development Economics*, *42*(1), 89-110.

Obadan M.I. (1982). Direct Foreign Investment in Nigeria: An Empirical Analysis, African Studies Review XXV (1).

Olusanya, S. O. (2013). Impact of foreign direct investment inflow on economic growth in a pre and post deregulated Nigeria economy. A granger causality test (1970-2010). *European Scientific Journal*, *9*(25).

Omoke Philip Chimobi and Ugwuanyi Charles Uche (2010). ―Export, Domestic demand and Economic Growth in Nigeria: Granger Causality Analysis‖. European Journal of Social Sciences, 13(2)

Onuoha, C.B., and Orogwu, U.O. (2013). "The Determinants of Foreign Direct Investment (FDI) and the Nigerian Economy". American International Journal of Contemporary Research, 3(11), 165 – 172

Perkins, C. M., Triplett, B. B., McIntyre, P. C., Saraswat, K. C., Haukka, S., & Tuominen, M. (2001). Electrical and materials properties of ZrO 2 gate dielectrics grown by atomic layer chemical vapor deposition. *Applied Physics Letters*, *78*(16), 2357-2359.

Pesaran, M.H., Shin, Y., 1999. An autoregressive distributed lag modelling approach to cointegration analysis. In: Strom, S. (Ed.), Econometrics and Economic Theory in the 20th Century: The Ragnar Frisch Centennial Symposium. Cambridge University Press, Cambridge

Polterovich, V., V. Popov (2006). Economic Growth, Real Exchange Rate, and Inflation

Reis, A. B. (2001). On the welfare effects of foreign investment. *Journal of international Economics*, *54*(2), 411-427.

Romer, P, 1990, Human capital and growth: theory and evidence, Carnegie Rochester Conference Series on Public Policy 32, pp.251-28

Rwenyagila, G. A. (2014). *Determinants of Export Performance in Tanzania* (Doctoral dissertation).

Saliminezhad, A., & Lisaniler, F. G. (2018). Validity of unbalanced growth theory and sectoral investment priorities in Indonesia: Application of feature ranking methods. *The Journal of International Trade & Economic Development*, *27*(5), 521-540.

Samuelson, P.A., and W. D. Nordhaus (2012) Economics, 19th edition, McGraw Hill

Savoia, A. S., Mauti, B., Manh, T., Hoff, L., Lanteri, F., Gelly, J. F., & Eggen, T. (2018, October). Design, fabrication and characterization of a hybrid piezoelectric-CMUT dual-frequency ultrasonic transducer. In *2018 IEEE International Ultrasonics Symposium (IUS)* (pp. 1-4). IEEE.

Schumpeter, J. A. (1946). John Maynard Keynes 1883-1946. *The American Economic Review*, *36*(4), 495-518.

Sezgin S and Yildirim J (2002), "The Demand for Turkish Defence Expenditure", Defence and Peace Economics, Special Issue on Military Affairs in Turkey and Greece, Vol. 13, No. 2, pp. 81-83.

Sodersten, B. (1970). International Economics. Harper and Row, New York

Sornarajah, M. (1994). Icsid involvement in asian foreign investment disputes: The amco and aapl cases. In *Asian Yearbook of International Law, Volume 4 (1994)* (pp. 69-98). Brill Nijhoff.

Thomasbb, D. S., & Gilbert, S. W. (2014). Costs and cost effectiveness of additive manufacturing. *NIST special publication*, *1176*, 12.

Tobin, J. (1965) .Money and Economic Growth. Econometrica, Vol. 33, pp. 671-684

Totonchi J (2011). Macroeconomic theories of inflation. Int. Conf. Econ. Finan. 4:459-462

Vernon, Raymond (1966, June) International trade and international investment in the product cycle. Quarterly Journal of Economics, pp. 190–207.

Voivodas, C. (1973) Exports, Foreign Capital and Economic Growth, in Journal of international economics.- Amsterdam , Elsevier, ISSN 0022-1996, ZDB-ID 1201438. - Vol. 3.1974, 4, p. 337-349

Wheeler, David and Mody (1992) international investment location decision: The case of U.S firm Journal International Economics 33:57-67

Wiener, N., 1956. The theory of prediction. In: Beckenbach, E. (Ed.), Modern Mathematics for Engineers. McGraw-Hill, New York

Wilhelms, S. K., & Witter, M. S. D. (1998). *Foreign direct investment and its determinants in emerging economies*. Washington DC: United States Agency for International Development, Bureau for Africa, Office of Sustainable Development.

Wyplosz, C., & Grafe, C. (1997). The Real Exchange Rate in Transition Economies.

Zhang, K. H., & Song, S. (2001). Promoting exports: the role of inward FDI in China. *China economic review*, *11*(4), 385-396.

Appendix

Unit root

ADF UNIT ROOT TEST

Null Hypothesis: GDPP has a unit root
Exogenous: None
Lag Length: 1 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.403932	0.7936
Test critical values:	1% level	-2.647120	
	5% level	-1.952910	
	10% level	-1.610011	

Null Hypothesis: D(GDPP) has a unit root
Exogenous: None
Lag Length: 0 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.118298	0.0349
Test critical values:	1% level	-2.647120	
	5% level	-1.952910	
	10% level	-1.610011	

*MacKinnon (1996) one-sided p-values.

FDI

Null Hypothesis: FDI has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.374193	0.0201
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

Null Hypothesis: D(FDI) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.065495	0.0000
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

INF

Null Hypothesis: INF has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.882756	0.0593
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

Null Hypothesis: D(INF) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.029047	0.0046
Test critical values:	1% level	-3.699871	
	5% level	-2.976263	
	10% level	-2.627420	

NT

Null Hypothesis: NT has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.423296	0.8919
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

Null Hypothesis: D(NT) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.770253	0.0001
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

*MacKinnon (1996) one-sided p-values.

REER

Null Hypothesis: REER has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.515774	0.1219
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

Null Hypothesis: D(REER) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.147764	0.0002
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

ARDL BOUND TEST

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	15.74273	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

ARDL SHORT RUN

ARDL Error Correction Regression
Dependent Variable: D(LGDPP)
Selected Model: ARDL(1, 4, 2, 4, 4)
Case 2: Restricted Constant and No Trend
Date: 12/29/22   Time: 15:04
Sample: 1 31
Included observations: 27

ECM Regression				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI)	0.068922	0.016517	4.172773	0.0042
D(FDI(-1))	-0.076512	0.011195	-6.834320	0.0002
D(FDI(-2))	-0.165529	0.023761	-6.966368	0.0002
D(FDI(-3))	-0.126811	0.022119	-5.733166	0.0007
D(INF)	0.001448	0.000505	2.865240	0.0242
D(INF(-1))	0.001961	0.000444	4.418572	0.0031
D(REER)	0.000401	0.000114	3.526390	0.0096
D(REER(-1))	0.000874	0.000158	5.527262	0.0009
D(REER(-2))	3.67E-05	5.96E-05	0.615130	0.5579
D(REER(-3))	-0.000150	6.42E-05	-2.331992	0.0525
D(NT)	-9.35E-13	3.28E-13	-2.852051	0.0246
D(NT(-1))	-1.57E-12	4.41E-13	-3.561226	0.0092
D(NT(-2))	-1.85E-12	4.68E-13	-3.959838	0.0055
D(NT(-3))	-8.17E-13	4.70E-13	-1.739063	0.1256
CointEq(-1)*	-0.139006	0.010924	-12.72498	0.0000

ARDL LONG

ARDL Long Run Form and Bounds Test
Dependent Variable: D(LGDPP)
Selected Model: ARDL(1, 4, 2, 4, 4)
Case 2: Restricted Constant and No Trend
Date: 12/29/22   Time: 16:03
Sample: 1 31
Included observations: 27

Conditional Error Correction Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.835870	0.433755	4.232499	0.0039
LGDPP(-1)*	-0.139006	0.034390	-4.042000	0.0049
FDI(-1)	0.039068	0.066575	0.586828	0.5757
INF(-1)	-0.002441	0.001339	-1.822974	0.1111
REER(-1)	-0.000617	0.000431	-1.432813	0.1950
NT(-1)	2.50E-12	7.78E-13	3.210096	0.0149
D(FDI)	0.068922	0.053433	1.289883	0.2381
D(FDI(-1))	-0.076512	0.066989	-1.142156	0.2909
D(FDI(-2))	-0.165529	0.053467	-3.095902	0.0174
D(FDI(-3))	-0.126811	0.057420	-2.208488	0.0629
D(INF)	0.001448	0.001311	1.104265	0.3060
D(INF(-1))	0.001961	0.000907	2.162633	0.0673
D(REER)	0.000401	0.000265	1.512446	0.1742
D(REER(-1))	0.000874	0.000329	2.657813	0.0326
D(REER(-2))	3.67E-05	0.000148	0.248541	0.8109
D(REER(-3))	-0.000150	0.000117	-1.284210	0.2399
D(NT)	-9.35E-13	6.46E-13	-1.447336	0.1911
D(NT(-1))	-1.57E-12	1.11E-12	-1.414913	0.2000
D(NT(-2))	-1.85E-12	1.06E-12	-1.741408	0.1252
D(NT(-3))	-8.17E-13	1.09E-12	-0.750971	0.4772

* p-value incompatible with t-Bounds distribution.

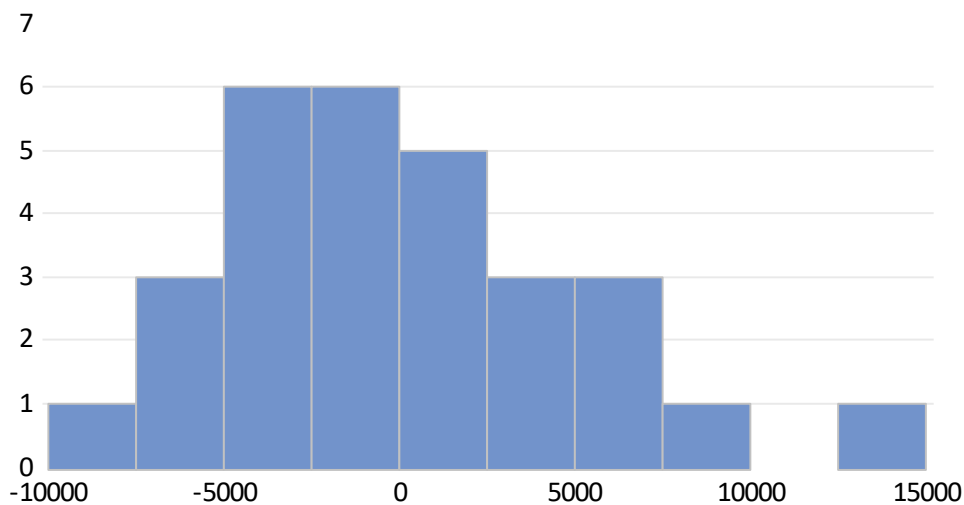| Levels Equation Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	0.281052	0.501706	0.560192	0.5928
INF	-0.017562	0.010700	-1.641325	0.1447
REER	-0.004441	0.003360	-1.321774	0.2278
NT	1.80E-11	5.59E-12	3.216763	0.0147
C	13.20715	0.400136	33.00662	0.0000

ARDL BOUND TEST

RESIDUAL DIAGNOSTIC TESTS

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.189824	Prob. F(2,17)	0.8288
Obs*R-squared	0.633488	Prob. Chi-Square(2)	0.7285

Series: Residuals	
Sample 3 31	
Observations 29	
Mean	-3.76e-11
Median	-610.9884
Maximum	14336.86
Minimum	-8651.987
Std. Dev.	5127.946
Skewness	0.747357
Kurtosis	3.524188
Jarque-Bera	3.031638
Probability	0.219628

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	1.006085	Prob. F(9,19)	0.4684
Obs*R-squared	9.359841	Prob. Chi-Square(9)	0.4047
Scaled explained SS	5.070741	Prob. Chi-Square(9)	0.8281

Test Equation:

STABILITY TEST
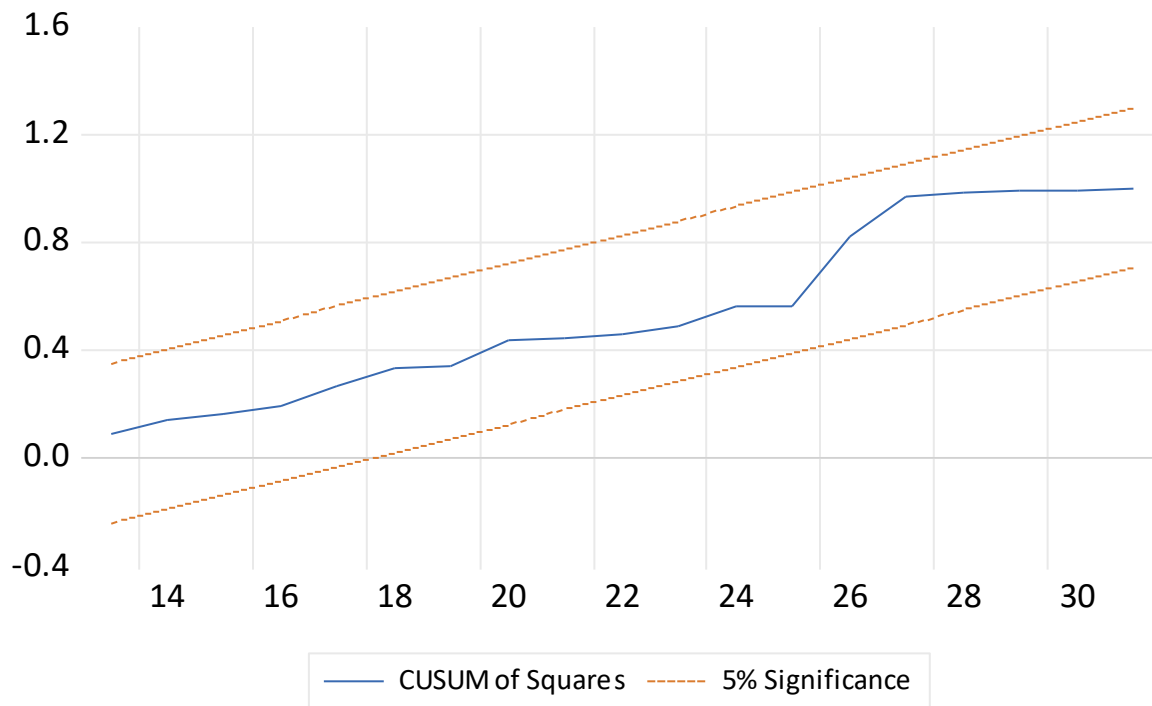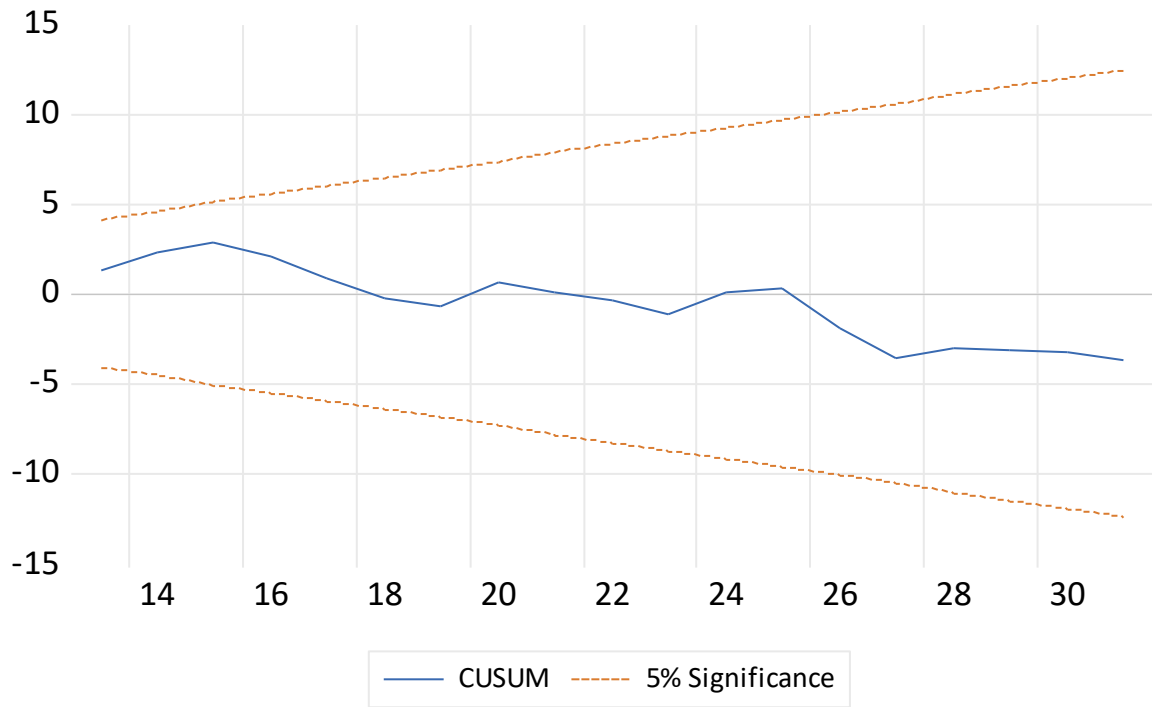
GRANGER CAUSALITY TEST

Pairwise Granger Causality Tests
Date: 12/28/22   Time: 12:22
Sample: 1 31
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause GDPP	29	0.79790	0.4619
GDPP does not Granger Cause FDI		0.13597	0.8735
INF does not Granger Cause GDPP	29	0.61386	0.5495
GDPP does not Granger Cause INF		3.03452	0.0668
NT does not Granger Cause GDPP	29	6.41730	0.0059
GDPP does not Granger Cause NT		0.97212	0.3927
REER does not Granger Cause GDPP	29	0.55018	0.5839
GDPP does not Granger Cause REER		0.50702	0.6086
INF does not Granger Cause FDI	29	6.44406	0.0058
FDI does not Granger Cause INF		11.2837	0.0004
NT does not Granger Cause FDI	29	0.08629	0.9176
FDI does not Granger Cause NT		0.01612	0.9840
REER does not Granger Cause FDI	29	0.58955	0.5624
FDI does not Granger Cause REER		3.34214	0.0524
NT does not Granger Cause INF	29	0.16702	0.8472
INF does not Granger Cause NT		0.02477	0.9756
REER does not Granger Cause INF	29	1.52290	0.2384
INF does not Granger Cause REER		6.28897	0.0064
REER does not Granger Cause NT	29	0.35246	0.7065
NT does not Granger Cause REER		0.07658	0.9265

Plagiarism Report

ABRAHAM_WALLACE KARSUAH

ORIGINALITY REPORT

14%	11%	5%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.researchgate.net Internet Source	1%
2	icanig.org Internet Source	1%
3	core.ac.uk Internet Source	<1%
4	www.iiste.org Internet Source	<1%
5	1library.net Internet Source	<1%
6	Submitted to Xiamen University Student Paper	<1%
7	biblioteca.hegoa.ehu.eus Internet Source	<1%
8	globaljournals.org Internet Source	<1%
9	theses.gla.ac.uk Internet Source	<1%